# Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

## Final Report

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## STATEMENT OF DATA CONFIDENTIALITY CLAIMS

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## GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

**Study Number:** 9070-100107ARTA

**Study Title:** Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

I, the undersigned, hereby declare that this study was performed in accordance with the Environmental Protection Agency (EPA) Good Laboratory Practice (GLP) regulations (Title 40 Part 160 with the exception of section 160.113. Dose concentrations of test and control substances will not be verified using analytical methods.

The study was conducted according to the procedures herein described and this report represents a true and accurate record of the results obtained. There were no deviations that impacted the quality or integrity of the study data. Any deviations that occurred during the course of the study were noted in this report, with the full write-ups included in the study binder.

[redacted]

Associate Study Director

27 Jan 2012

Date

## FLAGGING STATEMENT

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# QUALITY ASSURANCE STATEMENT

**Study Title:** Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

**Study Number:** 9070-100107ARTA

In accordance with CeeTox, Inc.'s policies and Quality Assurance standard operating procedures for Good Laboratory Practice (GLP), the conduct of this study has been audited as follows:

| Date(s) of Inspection/Audit | Inspection/Audit | Date(s) reported to Study Director | Date(s) reported to Management |
|---|---|---|---|
| 27Jun2011 | Draft Protocol Audit | 27Jun2011 | 27Jun2011 |
| 20Oct2011 and 21Oct2011 | In-Process Audit | 21Oct2011 | 21Oct2011 |
| 22Jan2012 | Data Binder | 22Jan2012 | 22Jan2012 |
| 23Jan2012 | Draft Report | 24Jan2012 | 24Jan2012 |

The signature below indicates the summary table is an accurate representation of Quality Assurance's involvement with this study.

[redacted] 27 Jan 2012

Date

Quality Assurance Auditor
4717 Campus Drive
Kalamazoo, MI 49008

# GENERAL INFORMATION

## Contributors

The following contributed to this report in the capacities indicated:

| Name | Title |
|---|---|
| [redacted] | Associate Study Director<br>Director of Laboratory Operations<br>Senior Scientist/Endocrine Group Leader<br>Scientist<br>Scientist<br>Scientist<br>Director of Project Management |

## Study Dates

Study initiation date: June 24, 2011
Experimental start date: October 13, 2011
Experimental termination date: November 4, 2011
Study termination date: January 27, 2012

## Deviations from the Protocol

See Appendix 2. There were seven deviations however they did not impact the integrity of the data in this report.

## Other

At the study closure, all study records including all original raw data and original final report, will be shipped to the sponsor at the following address:

NTP Archives
[redacted]
615 Davis Drive, Suite 300
Durham, NC 27713

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**EXECUTIVE SUMMARY**

## 1.1 Study Design

The objective of this study was to analyze the test substances for androgenic transactivation activity (agonism and antagonism) using the MDA-kb2 reporter cell line. The MDA-kb2 cell line was derived from a human breast cancer line transfected with an androgen receptor promoter linked to a luciferase gene. Consequently, the MDA-kb2 cell line can measure the ability of a test substance to induce (agonism) or antagonize Androgen Receptor (AR) mediated transactivation via luciferase gene expression. Cell viability was monitored by a two-read propidium iodide (PI) uptake assay.

Final concentration ranges of subsequent run(s) were adjusted based on assessments of precipitation observed in the first run. Solubility was visually observed for runs 1 and 2, and was read on the nepheloskan for run 3.

Two runs were conducted on octylmethoxycinnamate. The final concentrations were: $10^{-6.5}$, $10^{-6}$, $10^{-5.5}$, $10^{-5}$, $10^{-4.5}$, $10^{-4}$, $10^{-3.5}$ and $10^{-3}$ M for run 1 (13-October-2011) and $10^{-7.5}$, $10^{-7}$, $10^{-6.5}$, $10^{-6}$, $10^{-5.5}$, $10^{-5}$, $10^{-4.5}$ and $10^{-4}$ M for run 2 (20-October-2011). Three runs were conducted on oxybenzone, octylsalate and octocrylene. The final concentrations were: $10^{-6.5}$, $10^{-6}$, $10^{-5.5}$, $10^{-5}$, $10^{-4.5}$, $10^{-4}$, $10^{-3.5}$ and $10^{-3}$ M for run 1 (13-October-2011) and $10^{-7.5}$, $10^{-7}$, $10^{-6.5}$, $10^{-6}$, $10^{-5.5}$, $10^{-5}$, $10^{-4.5}$ and $10^{-4}$ M for runs 2 and 3 (20-October-2011 and 3-November-2011). The third run was used to clarify results of the first two runs for oxybenzone, octylsalate and octocrylene. Every run contained one agonism plate, one antagonism plate, and one cytotoxicity plate for each substance tested.

Solubility was recorded visually on runs 1 and 2 (13-October-2011 and 20-October-2011; (see deviation 2, Appendix 2). The Nepheloskan was used for run 3 (3-November-2011) at the concentrations of $10^{-7.5}$, $10^{-7}$, $10^{-6.5}$, $10^{-6}$, $10^{-5.5}$, $10^{-5}$, $10^{-4.5}$, $10^{-4}$, $10^{-3.5}$ and $10^{-3}$ for oxybenzone, octylsalate and octocrylene. The Nepheloskan was used (3-November-2011) at the concentrations of $10^{-7.5}$, $10^{-7}$, $10^{-6.5}$, $10^{-6}$, $10^{-5.5}$, $10^{-5}$, $10^{-4.5}$, and $10^{-4}$ for octylmethoxycinnamate due to the limited availability of test substance.

For agonist plates, all concentrations were tested in replicates of 6/plate, with the addition of 2 replicates/plate that incorporated the antagonist nilutamide which is used as a CeeTox internal control. Replicates incorporating the nilutamide allow for the identification of non-specific (i.e., non-androgen receptor mediated) induction of the luciferase gene.

For antagonist plates, all test substance concentrations included four replicates with 1 nM DHT and four replicates with 1000 nM DHT. Replicates incorporating 1000 nM DHT allowed for the identification of assay interference.

For cytotoxicity plates, all concentrations were tested in replicates of 6/plate, with the addition of 2 replicates/plate that incorporated digitonin. Replicates incorporating digitonin allow for the identification of assay interference.

The duration of exposure was 24 hours. A complete concentration response curve for each of 3 reference compounds (dihydrotestosterone (DHT), nilutamide (NIL) and 1,1-dichloro-2,2-bis(*p*-chlorophenyl)ethylene (p,p'-DDE)) was run each time the transcriptional activation assay was performed.

## 1.2 Results

Solubility was visually observed for run 1 and run 2. Solubility was run on the Nepheloskan for run 3. The top concentration for all test substances in run 1 (13-October-2011) was $10^{-3}$ M. Precipitation was observed at $10^{-4}$, $10^{-3.5}$ and $10^{-3}$ M in octylmethoxycinnamate. Precipitation was observed at $10^{-3.5}$ and $10^{-3}$ M in oxybenzone. Precipitation was observed at $10^{-4}$, $10^{-3.5}$ and $10^{-3}$ M in octylsalate. Precipitation was observed at $10^{-4}$, $10^{-3.5}$ and $10^{-3}$ M in octocrylene. The suitable top concentration of each test substance for use in later runs was $10^{-4}$ M, based on these observations. In run two (20-October-2011), slight precipitation was observed at $10^{-4}$ M in octylmethoxycinnamate and octylsalate. There was no evidence of precipitation in oxybenzone and octocrylene. In run 3, solubility was run on the Nepheloskan. With the criteria of ≥3 times the vehicle control octylsalate had a solubility limit of $10^{-4.5}$ M, oxybenzone had no solubility limit (soluble at all concentrations tested), octylmethoxycinnamate had a solubility limit of $10^{-4.5}$ M, and octocrylene had a solubility limit of $10^{-5}$ M. Cytotoxicity (≥20% reduction in cell viability) was observed in oxybenzone and octylsalate at $10^{-3.5}$ and $10^{-3}$ M in the first run (13-October-2011). Cytotoxicity was noted in oxybenzone at $10^{-4}$ in the second run (20-October-2011). Cytotoxicity was observed in octocrylene at $10^{-4.5}$, $10^{-4}$, $10^{-3.5}$ and $10^{-3}$ M in the first run (13-October-2011) and at the top two doses, $10^{-4.5}$ and $10^{-4}$ M, in the second run (20-October-2011) and at $10^{-4}$ M in the third run (3-November-2011).

In all independent runs of the agonist transcriptional activation assay, these test substances (octylmethoxycinnamate, oxybenzone, octylsalate and octocrylene) did not result in an increase in luciferase activity at any of the viable soluble concentrations tested ($RPC_{max}$<20%).

In two of two independent runs of the antagonist transcriptional activation assay, octylmethoxycinnamate did not result in a differential between the high antagonism and the low antagonism of greater than 50% at more than one viable soluble concentration.

In two of three independent runs of the antagonist transcriptional activation assay, oxybenzone did result in a differential between the high antagonism and the low antagonism of greater than 50% at more than one viable soluble concentration ($10^{-4.5}$ and $10^{-4}$).

In three of three independent runs of the antagonist transcriptional activation assay, octylsalate did not result in a differential between the high antagonism and the low antagonism of greater than 50% at more than one viable soluble concentration.

In three of three independent runs of the antagonist transcriptional activation assay, octocrylene did not result in a differential between the high antagonism and the low antagonism of greater than 50% at more than one viable soluble concentration.

### 1.3 Conclusion

Octylmethoxycinnamate, octylsalate and octocrylene do not demonstrate agonism or antagonism of AR mediated transactivation when tested in the MDA-kb2 cell model system. Oxybenzone does not demonstrate agonism, however there was a exposure dependent antagonism of AR-mediated transactivation when tested in the MDA-kb2 cell model system.

## 2.0 INTRODUCTION

### 2.1 Purpose

The objective of this study was to analyze the test substances for androgenic transactivation activity using the MDA-kb2 reporter cell line. The MDA-kb2 cell line is derived from a human breast cancer line transfected with an androgen receptor promoter linked to a luciferase gene. Consequently, the MDA-kb2 cell line can measure the ability of a test substance to induce (agonism) or antagonize AR mediated transactivation via luciferase gene expression.

The MDA-kb2 cell line is derived from human breast cancer cells. These cells were transformed with an androgen responsive luciferase reporter plasmid driven by the mouse mammary tumor virus promoter (MMTV). The MMTV promoter was chosen for transformation because it is a robust viral promoter and is well characterized as being androgen responsive. Consequently, the MDA-kb2 cell line can measure the ability of a test substance to induce AR-mediated transactivation of luciferase gene expression, i.e., the cell line can be used to assess the ability of a test substance to act as an agonist of AR. Antagonism can be distinguished by the differential ellicited from the co-administration of the test article and AR agonist DHT at a high concentration (1000 nM) versus the co-administration of the test article and the AR agonist DHT at a low concentration (1 nM).

### 2.2 Regulatory Citations

Currently this assay has not been validated as part of the EDSP Tier 1 testing program and is not mandated.

## 3.0 MATERIALS AND METHODS

### 3.1 Test Substance

#### 3.1.1 Test substance details

| | |
|---|---|
| Test substance name: | 2-Hydroxy-4-methoxybenzophenone |

| | |
|---|---|
| | (Oxybenzone) |
| Test substance manufacturer: | Ivy Fine Chemicals Corporation |
| CAS number: | 131-57-7 |
| Description: | Light yellow powder |
| Solvent used: | DMSO |
| Batch identification: | 20100801 |
| Expiry date: | August 1, 2012 |
| Purity: | 99.92% |
| Molecular formula: | $C_{14}H_{12}O_3$ |
| Molecular weight: | 228.25 |
| Storage conditions: | Room Temperature |

| | |
|---|---|
| Test substance name: | 2-Ethylhexyl p-methoxycinnamate (Octylmethoxycinnamate); Octyl 4-methoxycinnamate |
| Test substance manufacturer: | Acros Organics |
| CAS number: | 5466-77-3 |
| Description: | Clear colorless liquid |
| Solvent used: | DMSO |
| Batch identification: | A0293319 |
| Recertification date: | Not Provided |
| Purity: | 99.8% |
| Molecular formula: | $C_{18}H_{26}O_3$ |
| Molecular weight: | 290.39 |
| Storage conditions: | Room Temperature |

| | |
|---|---|
| Test substance name: | Octyl Salicylate (Octylsalate); 2-Ethylhexyl salicylate |
| Test substance manufacturer: | Sigma Aldrich |
| CAS number: | 118-60-5 |
| Description: | Colorless liquid |
| Solvent used: | DMSO |
| Batch identification: | 44698PJ |
| Recertification date: | Not Provided |
| Purity: | 99.6% |
| Molecular formula: | $C_{15}H_{22}O_3$ |
| Molecular weight: | 250.33 |
| Storage conditions: | Room Temperature |

| | |
|---|---|
| Test substance name: | 2-Ethylhexyl 2-cyano-3,3-diphenylacrylate (Octocrylene) |
| Test substance manufacturer: | Sigma Aldrich |
| CAS number: | 6197-30-4 |
| Description: | Yellow viscous liquid |
| Solvent used: | DMSO |

| | |
|---|---|
| Batch identification: | 01697MJ |
| Recertification date: | Not Provided |
| Purity: | 99.2% |
| Molecular formula: | $C_{24}H_{27}NO_2$ |
| Molecular weight: | 361.48 |
| Storage conditions: | Room Temperature |

Certificates of analysis for the test substances are presented in Appendix 3.

### 3.1.2 Vehicle selection

Dimethyl sulfoxide (DMSO) was selected as a suitable vehicle for test substances. Therefore, solutions with a test substance concentration of up to $10^{-3}$ M (the highest concentration tested) can be prepared while limiting the final concentration of DMSO in the assay medium to 0.5% (v/v). Dihydrotestosterone, nilutamide, p,p'-DDE and test substances were all prepared on the day of dosing (13-October-2011 for run 1, 20-October-2011 for run 2, and 3-November-2011 for run 3).

## 3.2 Cell Line

### 3.2.1 Source

The stably transfected MDA-kb2 cell line was used in this study. The cell line was obtained from ATCC (Appendix 3). The cells were certified as Mycoplasma Free (Appendix 4).

### 3.2.2 Stability of the cell line

The stability of the cell line was monitored by the use of the following reference chemicals: dihydrotestosterone (DHT), nilutamide (Nil) and p,p'-DDE. A complete concentration response curve for each reference compound was run each time the transcriptional activation assay was performed.

### 3.2.3 Cell culture and plating conditions

Cells were maintained in Leibovitz's L-15 culture medium containing 10% fetal bovine serum, in an incubator at ~37°C without $CO_2$. The MDA-kb2 cell line is not contact inhibited and can be grown to confluence. Cells were subcultivated at a 1:2 to 1:8 subcultivation ratio. The cells were suspended with complete medium and plated into wells of a 96-well cell culture plate at a density of ~1 X $10^4$ cells/100 µL/well. The cells were then placed into an incubator without $CO_2$ at ~37°C overnight prior to chemical exposure.

## 3.3 Chemical Exposure and Assay Plate Organization

Each test substance was prepared for addition to the cell system by making a 400 mM stock. Dilutions were prepared in DMSO to 400x final target concentration. Ten microliter aliquots of the substance dilutions were added to 2 mL media in deep well plates and mixed to yield concentrations of test material 2-fold greater than the desired final concentration.

After the overnight post-seeding incubation, the plates were removed from the incubator and the media was aspirated. Fifty microliters of media and appropriate controls were added to the seeded plates. To achieve the final exposure concentrations each 2X solution was diluted 2-fold in the 96-well plate containing the cells and media and controls.

Agonism

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | Blank* | DHT (10 nM) | VC** | VC | Conc. 1 | Conc. 2 | Conc. 3 | Conc. 4 | Conc. 5 | Conc. 6 | Conc. 7 | Conc. 8 |
| B | ↓*** | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| C | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| D | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| E | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| F | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| G | ----------As above + antagonist (10 μM nilutamide)---------- | | | | | | | | | | | |
| H | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

DHT = dihydrotestosterone
*Blank wells contain media only (no cells)
**Vehicle control (VC) wells contain cells and media + 0.5% (v/v) DMSO
***↓ Indicates the composition of the well is identical to the well directly above it

Antagonism

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | Blank* | *** (nM) | VC** | VC | Conc. 1 | Conc. 2 | Conc. 3 | Conc. 4 | Conc. 5 | Conc. 6 | Conc. 7 | Conc. 8 |
| B | ↓*** | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| C | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| D | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| E | ----------As above + (1000 nM DHT instead of 1 nM DHT)---------- | | | | | | | | | | | |
| F | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| G | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| H | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |

***10 nM dihydrotestosterone (DHT) Maximal induction control wells
*Blank wells contain media only (no cells)
**Vehicle control (VC) wells contain cells and media + 0.5% (v/v) DMSO
****↓ Indicates the composition of the well is identical to the well directly above it
Rows A-D are low agonist (1 nM DHT)
Rows E-H are high agonist (1000 nM DHT)

After adding the reference chemicals/test substances, the plates were incubated in an incubator at ~37°C without $CO_2$ for ~24 hours.

For the agonism plates, all concentrations were tested in replicates of 6/plate. In addition, for each concentration, 2 replicates/plate were prepared that incorporated the AR antagonist nilutamide. Replicates incorporating an AR antagonist allow for the identification of non-specific (i.e., non-AR-mediated) induction of the luciferase gene as true AR-mediated induction is inhibited by addition of an antagonist whereas non-specific induction is not.

For the antagonism plates, all concentrations were tested in replicates of 4/plate. Four replicates were co-administered 1 nM DHT and test article at each concentration. Four replicates were co-administered 1000 nM DHT and test article at each concentration. Replicates incorporating 1000 nM DHT allowed for the identification of assay interference.

In view of the short-term nature of studies of this type, no analyses of stability, homogeneity or achieved concentration(s) were carried out on preparations of the test substance or positive control chemicals, either before or after the treatment phase. This was not considered to have affected the integrity of the study. For the reference control compounds, stability was demonstrated by an appropriate response in the assay system.

## 3.4 Assays

### 3.4.1 Cytotoxicity assay

Cell viability was monitored by a two-read propidium iodide (PI) uptake assay. PI was a light sensitive dye and all procedures were conducted under low light conditions. PI could not cross the plasma membrane of intact and viable cells. Cells that were dead or dying had weakened plasma membranes which allowed PI to enter the cytosol of the damaged cells. Once inside the cell, PI intercalated into DNA/RNA and yielded a fluorescent signal. In the two-read procedure, the first read was taken immediately after full exposure to controls and test articles. This measured "background" fluorescence. The cells were then lysed and a second read was taken. This read indicated cell death. The first read was then subtracted from the second read. The results of the subtracted reads were directly proportional to the viability of the cells. The control and test substance data were normalized to vehicle control to generate percent cell viability.

Cells were seeded as described in Section 3.2.3, with the exception that a black-walled 96-well cell culture plate was used. The cells were exposed to the test chemicals in replicates of 6 (rows A-F) while the last 2 rows (G and H) received 125 µM digitonin as a positive control for cell death. Following chemical exposure, the growth medium was removed and 50 µL of a PI working solution (44 µM in phosphate buffered saline) was added to each well. Background fluorescence was evaluated by measuring fluorescence immediately on a Packard Fusion fluorescence plate reader at an excitation wavelength of 544 nm and an emission wavelength of 612 nm. Following this determination, 50 µL of a 2% (v/v) Triton X-100 solution was added to each well and the plate was incubated at room temperature for

~15 minutes to fully lyse all cells in the wells before measuring fluorescence at the same wavelengths.

The background-corrected fluorescence was calculated for each well by subtracting the results of the first read from the results of the second read. The change in cell viability was determined by comparing treated wells to the vehicle control wells. A ≥20% reduction in cell viability was considered evidence of cytotoxicity.

### 3.4.2 Precipitation assessment

Solubility limits for runs 1 and 2 (13-October-2011 and 20-October-2011) were determined by visual observation. For run 3, the limit of solubility was determined by Nephelometry. A 96-well clear bottom plate containing 200 µL of every test concentration in cell culture media was evaluated using the Nepheloskan. Nephelometry measured the particulate light scattering.

### 3.4.3 Transcriptional activation assay

A luciferase assay was performed as described in CeeTox Standard Operating Protocol (SOP) 2041 using the reagents listed below. Luciferase assay reagent was prepared as described in CeeTox SOP 2041 (proprietary information).

| Reagent | Supplier | Catalog # |
|---|---|---|
| Trisma Base | Sigma | T6066 |
| Magnesium Chloride | Sigma | M2393 |
| EDTA | Sigma | E5134 |
| Dithiothreitol | Sigma | D9779 |
| ATP | Sigma | A2383 |
| Coenzyme A | Sigma | C3019 |
| AMP | Sigma | A1752 |
| Luciferin | Promega | E160E |
| Glycerol | Sigma | G5516 |
| Triton-X100 | Sigma | T8787 |
| Bovine Serum Albumin | Sigma | A9418 |
| CDTA | Sigma | D0922 |

## 3.5 Agonist Transcriptional Activation Assay Data Analysis and Interpretation

In order to determine the relative transcriptional activity as compared to the positive control (PC), 10 nM DHT, the luminescence data from each plate were analyzed according to the steps outlined below. Wells incorporating nilutamide were analyzed in an identical fashion to wells not incorporating nilutamide, except that the data were normalized by subtracting the mean value for the nilutamide-containing vehicle control (VC) wells.

1. Any cytotoxic concentrations (as defined in Section 3.4.1) were excluded from data analysis.
2. The mean value for the VC wells was calculated.
3. The mean value for the VC wells was subtracted from each well to normalize the data.
4. The mean value for the normalized PC wells was calculated.
5. The normalized value for each well was divided by the mean value of the normalized PC wells (with the normalized mean of the PC wells being defined as 100% relative transcriptional activity). The final value for each well is the relative transcriptional activity for that well compared to the mean normalized PC response.

The data were then interpreted according to the following steps:

1. Where appropriate, $LogPC_{50}$, $LogPC_{10}$, $LogEC_{50}$ and Hill slope values were calculated.
2. For the test substance, the maximum response relative to the positive control ($RPC_{Max}$) was determined. In each individual run of the transcriptional activation assay, if $RPC_{max}$ was less than 20%, the test substance was considered to have given a negative response for AR agonism.
3. For each individual run of the transcriptional activation assay, the acceptability of the data was evaluated using the following criteria:
    - The mean normalized luciferase signal of the PC (10 nM DHT) should be at least 4-fold that of the mean VC on each plate.
    - The results of the reference compounds, nilutamide and DHT, should be within the acceptable ranges.
4. If the acceptability criteria outlined above were met, that run of the transcriptional activation assay was considered to be definitive
5. The test substance was considered negative if $RPC_{Max}$ was <20% in at least 2 definitive runs of the transcriptional activation assay. The test substance was considered positive if $RPC_{Max}$ was ≥20% in at least 2 definitive runs of the transcriptional activation assay.

## 3.6 Antagonist Transcriptional Activation Assay Data Analysis and Interpretation

In order to determine the relative transcriptional activity as compared to the positive control (PC), 10 nM DHT, the luminescence data from each plate were analyzed according to the steps outlined below. Wells incorporating 1 nM DHT were analyzed in an identical fashion to wells incorporating 1000 nM DHT, except that the data was normalized to the induced control with 1 nM DHT or 1000 nM DHT, respectively.

1. Any cytotoxic concentrations (as defined in Section 3.4.1) were excluded from data analysis.
2. The mean value for the VC wells was calculated.

3. The mean value for the VC wells was subtracted from each well to normalize the data.
4. The mean value for the induced control with 1 nM DHT was calculated.
5. The mean value for the induced control with 1000 nM DHT was calculated.
6. The wells dosed with test or control substance and 1 nM DHT were normalized to the mean value for the induced control with 1 nM DHT.
7. The wells dosed with test or control substance and 1000 nM DHT were normalized to the mean value for the induced control with 1000 nM DHT.
8. Averages of antagonist % maximal induction control were calculated (test or control substance a with 1 nM DHT).
9. Averages of high agonist control % maximal induction control were calculated (test or control substance a with 1000 nM DHT).
10. Differentials were calculated (averages of high agonist control % maximal induction control minus averages of antagonist % maximal induction control).

The data were then interpreted according to the following steps:

1. Where appropriate, RICMax, Differential $IC_{50}$, Differential $IC_{30}$, $LogEC_{50}$ and Hill slope values were calculated.
2. If the differential between the high antagonism and the low antagonism was greater then 50% and had a dose response (more than one data point) in two of two runs, than the test substance was considered positive.
3. If the differential between the high antagonism and the low antagonism was less then 50% and did not have a dose response (more than one data point) in two of two runs, than the test substance was considered negative.
4. For each individual run of the transcriptional activation assay, the acceptability of the data was evaluated using the following criteria:
    - The mean normalized luciferase signal of the PC (10 nM DHT) should have been at least 4-fold that of the negative control on each plate.
5. If the acceptability criteria outlined above were met, that run of the transcriptional activation assay was considered to be definitive.

# 4.0 RESULTS AND DISCUSSION

## 4.1 Concentration Range for the Test Substance

The final concentrations were: $10^{-6.5}$, $10^{-6}$, $10^{-5.5}$, $10^{-5}$, $10^{-4.5}$, $10^{-4}$, $10^{-3.5}$ and $10^{-3}$ M for run 1 (13-October-2011) and $10^{-7.5}$, $10^{-7}$, $10^{-6.5}$, $10^{-6}$, $10^{-5.5}$, $10^{-5}$, $10^{-4.5}$ and $10^{-4}$ M for runs 2 and 3 (20-October-2011 and 3-November-2011). Test concentrations were reduced after the first run due to observed precipitation.

## 4.2 Transcriptional Activation Assay Acceptance Criteria

In all valid independent runs of the assay, the mean luciferase activity of the PC (10 nM DHT) was greater than 4-fold that of the mean luciferase activity of the VC on each plate.

Test article data and data from the 3 reference compounds were excluded from evaluation and interpretation in instances of excessive cytotoxicity or precipitation observed in the valid independent runs.

## 4.3 Transcriptional Activation Assay Results

Two runs were conducted on octylmethoxycinnamate and three runs were conducted on octylsalate, oxybenzone and octocrylene. The third run was to clarify antagonism classification on borderline substances (substances whose results suggested antagonism just before cytotoxicity).

In all independent runs of the agonist transcriptional activation assay, test substances (octylmethoxycinnamate, oxybenzone, octylsalate and octocrylene) did not result in an increase in luciferase activity at any of the viable soluble concentrations tested ($RPC_{max}$<20%).

In two of two independent runs of the antagonist transcriptional activation assay, octylmethoxycinnamate did not result in a differential between the high antagonism and the low antagonism of greater than 50% at more than one viable soluble concentration.

In two of three independent runs of the antagonist transcriptional activation assay, oxybenzone did result in a differential between the high antagonism and the low antagonism of greater than 50% at more than one viable soluble concentration ($10^{-4.5}$ and $10^{-4}$).

In three of three independent runs of the antagonist transcriptional activation assay, octylsalate did not result in a differential between the high antagonism and the low antagonism of greater than 50% at more than one viable soluble concentration.

In three of three independent runs of the antagonist transcriptional activation assay, octocrylene did not result in a differential between the high antagonism and the low antagonism of greater than 50% at more than one viable soluble concentration.

## 4.4 Discussion

The suitable top concentration of test substances for use in the transcriptional activation assays was $10^{-4}$ M, based on precipitation observed at concentrations $\geq 10^{-4}$ M. Cytotoxicity (≥20% reduction in cell viability) was observed in oxybenzone and octylsalate at $10^{-3.5}$ and $10^{-3}$ M in the first run (13-October-2011). Cytotoxicity was noted in oxybenzone at $10^{-4}$ in the second run (20-October-2011). Cytotoxicity was observed in octocrylene at $10^{-4.5}$, $10^{-4}$,

$10^{-3.5}$ and $10^{-3}$ M in the first run (13-October-2011) and at the top two doses, $10^{-4.5}$ and $10^{-4}$ M, in the second run (20-October-2011) and $10^{-4}$ M in the third run (3-November-2011).

In all independent runs of the transcriptional activation assay, test substances did not result in an increase in luciferase activity in agonism plates at any of the viable soluble concentrations tested ($RPC_{max}$<20%).

In all independent runs of the transcriptional activation assay, octylmethoxycinnamate, octylsalate and octocrylene did not result in a differential on the antagonism plates greater than 50% for two or more viable soluble doses.

In two of three independent runs of the transcriptional activation assay, oxybenzone did result in a differential on the antagonism plates greater than 50% for two viable soluble doses.

## 5.0 CONCLUSIONS

Octylmethoxycinnamate, octylsalate and octocrylene did not demonstrate agonism or antagonism of AR-mediated transactivation when tested in the MDA-kb2 cell model system. Oxybenzone did not demonstrate agonism, however there was an exposure dependent antagonism of AR-mediated transactivation when tested in the MDA-kb2 cell model system.

## 6.0 REFERENCES

Wilson, VS., Bobseine, K., Lambright, CR., and Gray, LE., Jr. (2002). A novel cell line, MDA-kb2, which stably expresses an androgen and glucocorticoid-responsive reporter for detection of hormone receptor agonists and antagonists. *Toxicol. Sci.* **66**, 69-81.

# TABLES SECTION

## TABLE 1 Results of 1st Valid Transcriptional Activation Assay Agonist

| Chemical | Concentration (M) | RTA (% of PC) | | RTA with Nil (% of PC) | | Cell Viability (% of VC) | | Precipitation |
|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Value 1 | Value 2 | Mean | SD | Value |
| Octylmethoxycinnamate | -6.5 | 0.4 | 0.2 | 0.7 | 0.3 | 105 | 6 | - |
| | -6 | 1.6 | 0.5 | -0.1 | 0.3 | 110 | 9 | - |
| | -5.5 | 0.9 | 0.3 | 0.9 | -0.5 | 107 | 6 | - |
| | -5 | 1.7 | 0.3 | -0.3 | -0.5 | 102 | 9 | - |
| | -4.5 | 0.9 | 0.3 | -0.8 | -1.0 | 100 | 2 | - |
| | -4 | -0.2 | 0.2 | -1.1 | -1.6 | 89 | 6 | + |
| | -3.5 | 0.0 | 0.4 | -1.1 | -1.8 | 90 | 5 | + |
| | -3 | -0.1 | 0.3 | -1.4 | -1.7 | 91 | 4 | + |
| Octylsalate | -6.5 | 0.5 | 0.6 | -0.6 | -1.5 | 96 | 5 | - |
| | -6 | 1.0 | 0.5 | 3.8 | -0.5 | 104 | 9 | - |
| | -5.5 | 0.5 | 0.4 | 3.3 | -0.7 | 95 | 2 | - |
| | -5 | -0.2 | 0.1 | -0.6 | -1.2 | 97 | 5 | - |
| | -4.5 | -0.4 | 0.1 | 0.0 | -0.6 | 97 | 5 | - |
| | -4 | -0.6 | 0.1 | -0.8 | -1.2 | 88 | 7 | + |
| | -3.5 | * | * | * | * | **70 | **5 | + |
| | -3 | * | * | * | * | **66 | **5 | + |
| Octocrylene | -6.5 | 0.5 | 0.2 | 7.0 | 0.1 | 105 | 5 | - |
| | -6 | 1.0 | 0.6 | 4.3 | 0.1 | 106 | 4 | - |
| | -5.5 | -0.5 | 0.3 | 0.2 | -0.3 | 102 | 6 | - |
| | -5 | -1.2 | 0.2 | 1.0 | -0.8 | 95 | 5 | - |
| | -4.5 | * | * | * | * | **74 | **2 | - |
| | -4 | * | * | * | * | **59 | **4 | + |
| | -3.5 | * | * | * | * | **49 | **6 | + |
| | -3 | * | * | * | * | **60 | **6 | + |
| Oxybenzone | -6.5 | 0.4 | 0.2 | 1.3 | -2.9 | 104 | 6 | - |
| | -6 | 0.8 | 0.4 | 0.9 | -2.9 | 106 | 5 | - |
| | -5.5 | 0.0 | 0.2 | 4.4 | -3.3 | 102 | 4 | - |
| | -5 | -0.2 | 0.3 | -1.5 | -2.9 | 101 | 4 | - |
| | -4.5 | 0.0 | 0.2 | 23.8 | -1.8 | 99 | 6 | - |
| | -4 | -0.2 | 0.2 | 12.0 | -2.8 | 94 | 4 | - |
| | -3.5 | * | * | * | * | **66 | **5 | + |
| | -3 | * | * | * | * | **63 | **6 | + |

RTA = Relative Transcriptional Activation
PC = Positive Control (10 nM DHT)
VC = Vehicle Control
SD = Standard Deviation
+ = Precipitation observed
- = No precipitation observed
* = data not evaluated due to observed Cytotoxicity
** = Cytotoxicity observed

## TABLE 1 Results of 1st Valid Transcriptional Activation Assay Agonist (Continued)

| Chemical | Concentration (M) | RTA (% of PC) | | RTA with Nil (% of PC) | | Cell Viability (% of VC) | | Precipitation |
|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Value 1 | Value 2 | Mean | SD | Value |
| DHT | -11.5 | 1.9 | 0.3 | -0.2 | -1.1 | 100 | 3 | |
| | -11 | 2.7 | 0.5 | 1.5 | -0.7 | 101 | 3 | |
| | -10.5 | 9.6 | 0.8 | 5.8 | -0.5 | 102 | 5 | |
| | -10 | 26.9 | 2.6 | 5.6 | -0.3 | 104 | 6 | |
| | -9.5 | 79.4 | 8.6 | 7.3 | 1.2 | 101 | 5 | |
| | -9 | 95.6 | 5.2 | 13.5 | 3.6 | 101 | 3 | |
| | -8.5 | 111.7 | 9.4 | 17.3 | 7.1 | 101 | 5 | |
| | -8 | 87.1 | 7.0 | 41.1 | 26.2 | 96 | 5 | |
| Nil | -7.5 | 0.9 | 0.1 | 2.1 | -0.9 | 103 | 7 | |
| | -7.0 | -0.1 | 0.4 | 1.8 | -0.9 | 104 | 10 | |
| | -6.5 | -0.5 | 0.2 | 0.8 | -1.0 | 102 | 5 | |
| | -6.0 | -0.8 | 0.1 | -0.6 | -0.9 | 102 | 7 | |
| | -5.5 | -0.2 | 0.1 | 1.6 | 0.1 | 98 | 3 | |
| | -5.0 | 0.5 | 0.2 | 0.8 | 0.6 | 97 | 6 | |
| | -4.5 | 2.1 | 0.3 | -0.6 | 0.1 | 84 | 5 | |
| | -4.0 | * | * | * | * | **61 | **1 | |
| ppDDE | -7.5 | 3.8 | 0.8 | 4.2 | -0.5 | 106 | 5 | - |
| | -7.0 | 3.2 | 0.4 | 2.5 | -0.7 | 107 | 6 | - |
| | -6.5 | 3.5 | 0.5 | 1.9 | -0.6 | 105 | 5 | - |
| | -6.0 | 1.7 | 0.5 | 5.6 | -0.7 | 101 | 7 | - |
| | -5.5 | 1.2 | 0.3 | 4.0 | 0.3 | 98 | 3 | - |
| | -5.0 | 0.8 | 0.3 | 1.9 | 0.4 | 97 | 4 | - |
| | -4.5 | 1.9 | 0.5 | 2.9 | 1.3 | 95 | 2 | - |
| | -4.0 | * | * | * | * | **68 | **4 | - |

RTA = Relative Transcriptional Activation
PC = Positive Control (10 nM DHT)
VC = Vehicle Control
SD = Standard Deviation
+ = Precipitation observed
- = No precipitation observed
* = data not evaluated due to observed Cytotoxicity
** = Cytotoxicity observed
shaded areas not evaluated

## TABLE 2 Results of 1st Valid Transcriptional Activation Assay Antagonist

| Chemical | Concentration (LogM) | Low Agonist Maximal Induction Antagonism (%) | | High Agonist Maximum Induction (1000 nM DHT) (%) | | Differential |
|---|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD | |
| **10 nM DHT** | | 110.0 | 8.3 | 104.9 | 7.5 | |
| **VC** | | 0.0 | 0.5 | 100.5 | 11.9 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 9.0 | 99.5 | 11.4 | |
| **Octylmethoxycinnamate** | -6.5 | 113.6 | 11.8 | 108.9 | 5.6 | -4.7 |
| | -6.0 | 104.7 | 9.0 | 106.6 | 14.3 | 1.9 |
| | -5.5 | 128.8 | 5.2 | 115.8 | 14.3 | -13.0 |
| | -5.0 | 102.8 | 13.8 | 99.2 | 11.9 | -3.7 |
| | -4.5 | 98.5 | 15.9 | 94.5 | 9.7 | -4.0 |
| | -4.0 | 64.4 | 13.0 | 67.9 | 6.4 | 3.4 |
| | -3.5 | 69.2 | 10.9 | 66.4 | 5.0 | -2.8 |
| | -3.0 | 77.7 | 2.5 | 78.9 | 6.6 | 1.2 |
| **10 nM DHT** | | 109.9 | 10.2 | 94.9 | 15.8 | |
| **VC** | | 0.0 | 0.3 | 92.3 | 6.5 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 7.7 | 107.7 | 9.2 | |
| **Octylsalate** | -6.5 | 119.9 | 12.2 | 116.0 | 8.3 | -3.9 |
| | -6.0 | 114.0 | 3.9 | 115.2 | 6.2 | 1.2 |
| | -5.5 | 125.1 | 5.5 | 127.9 | 5.7 | 2.7 |
| | -5.0 | 101.6 | 3.2 | 135.1 | 5.4 | 33.5 |
| | -4.5 | 104.9 | 6.4 | 139.2 | 15.9 | 34.3 |
| | -4.0 | 66.9 | 6.7 | 160.5 | 6.7 | #93.7 |
| | -3.5 | * | * | * | * | * |
| | -3.0 | * | * | * | * | * |
| **10 nM DHT** | | 126.3 | 7.2 | 100.9 | 12.5 | |
| **VC** | | 0.0 | 0.3 | 92.8 | 7.1 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 3.9 | 107.2 | 10.9 | |
| **Octocrylene** | -6.5 | 130.4 | 5.6 | 111.2 | 15.1 | -19.1 |
| | -6.0 | 111.6 | 9.9 | 120.8 | 9.8 | 9.2 |
| | -5.5 | 109.2 | 14.9 | 132.1 | 12.1 | 22.9 |
| | -5.0 | 61.3 | 7.3 | 118.9 | 7.7 | #57.6 |
| | -4.5 | * | * | * | * | * |
| | -4.0 | * | * | * | * | * |
| | -3.5 | * | * | * | * | * |
| | -3.0 | * | * | * | * | * |
| **10 nM DHT** | | 98.9 | 6.1 | 98.1 | 12.1 | |
| **VC** | | 0.0 | 0.3 | 95.8 | 9.2 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 6.7 | 104.2 | 9.1 | |
| **Oxybenzone** | -6.5 | 105.6 | 13.0 | 117.8 | 4.5 | 12.2 |
| | -6.0 | 100.0 | 10.0 | 110.2 | 10.3 | 10.2 |
| | -5.5 | 121.4 | 4.5 | 137.4 | 6.4 | 16.0 |
| | -5.0 | 102.4 | 4.0 | 142.6 | 3.7 | 40.2 |
| | -4.5 | 72.1 | 9.1 | 181.7 | 1.2 | #109.5 |
| | -4.0 | 21.1 | 2.2 | 174.8 | 11.8 | #153.8 |
| | -3.5 | * | * | * | * | * |
| | -3.0 | * | * | * | * | * |

VC = Vehicle Control
SD = Standard Deviation
* = data not evaluated due to observed Cytotoxicity, Cytotoxicity values shown on corresponding agonist table
shaded areas = does not apply
# = differential > 50

## TABLE 2 Results of 1st Valid Transcriptional Activation Assay Antagonist (Continued)

| Chemical | Concentration (LogM) | Low Agonist Maximal Induction Antagonism (%) | | High Agonist Maximum Induction (1000 nM DHT) (%) | | Differential |
|---|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD | |
| **10 nM DHT** | | 117.1 | 9.0 | 104.5 | 9.2 | |
| **VC** | | 0.0 | 0.3 | 98.9 | 3.0 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 12.4 | 101.1 | 2.8 | |
| **DHT** | -11.5 | 142.5 | 15.4 | 124.4 | 9.5 | -18.1 |
| | -11 | 108.1 | 8.5 | 114.5 | 5.2 | 6.3 |
| | -10.5 | 140.3 | 13.9 | 124.2 | 13.8 | -16.1 |
| | -10 | 115.4 | 13.3 | 112.4 | 3.3 | -3.0 |
| | -9.5 | 149.0 | 20.1 | 134.2 | 7.8 | -14.8 |
| | -9 | 163.3 | 27.2 | 132.0 | 4.0 | -31.2 |
| | -8.5 | 159.7 | 12.5 | 134.1 | 8.7 | -25.6 |
| | -8 | 152.4 | 7.1 | 121.6 | 13.4 | -30.8 |
| **10 nM DHT** | | 112.6 | 10.4 | 103.5 | 5.8 | |
| **VC** | | 0.0 | 0.3 | 99.5 | 5.8 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 10.1 | 100.5 | 6.5 | |
| **Nil** | -7.5 | 96.8 | 6.4 | 100.6 | 9.6 | 3.8 |
| | -7.0 | 89.0 | 9.3 | 109.5 | 11.7 | 20.5 |
| | -6.5 | 62.1 | 4.1 | 124.1 | 11.6 | #62.0 |
| | -6.0 | 20.3 | 2.4 | 106.4 | 6.0 | #86.1 |
| | -5.5 | 6.7 | 0.9 | 124.2 | 8.5 | #117.5 |
| | -5.0 | 3.5 | 0.7 | 121.7 | 18.2 | #118.2 |
| | -4.5 | 4.4 | 0.6 | 84.9 | 5.4 | #80.6 |
| | -4.0 | * | * | * | * | * |
| **10 nM DHT** | | 118.8 | 15.9 | 102.6 | 9.0 | |
| **VC** | | 0.0 | 0.2 | 101.0 | 4.3 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 2.6 | 99.0 | 13.4 | |
| **ppDDE** | -7.5 | 112.3 | 9.4 | 111.6 | 7.2 | -0.7 |
| | -7.0 | 111.2 | 2.3 | 103.3 | 5.2 | -7.9 |
| | -6.5 | 133.5 | 10.9 | 118.0 | 10.3 | -15.5 |
| | -6.0 | 108.6 | 9.3 | 100.8 | 6.3 | -7.9 |
| | -5.5 | 101.7 | 3.4 | 117.0 | 6.9 | 15.3 |
| | -5.0 | 62.9 | 7.4 | 109.2 | 12.9 | 46.3 |
| | -4.5 | 25.3 | 2.9 | 111.4 | 11.5 | #86.2 |
| | -4.0 | * | * | * | * | * |

VC = Vehicle Control
SD = Standard Deviation
* = data not evaluated due to observed Cytotoxicity, Cytotoxicity values shown on corresponding agonist table
shaded areas = does not apply
# = differential > 50

## TABLE 3 Results of 2nd Valid Transcriptional Activation Assay Agonist

| Chemical | Concentration (M) | RTA (% of PC) | | RTA with Nil (% of PC) | | Cell Viability (% of VC) | | Precipitation |
|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Value 1 | Value 2 | Mean | SD | Value |
| Octylmethoxycinnamate | -7.5 | 0.2 | 0.2 | 0.0 | 0.5 | 104 | 6 | - |
| | -7.0 | 0.1 | 0.2 | -0.3 | 0.3 | 107 | 6 | - |
| | -6.5 | 0.2 | 0.3 | -1.4 | 0.8 | 99 | 6 | - |
| | -6.0 | 0.2 | 0.3 | -2.1 | 0.2 | 102 | 12 | - |
| | -5.5 | 1.0 | 0.1 | 1.6 | 1.2 | 99 | 5 | - |
| | -5.0 | 0.5 | 0.2 | -0.8 | 0.5 | 103 | 9 | - |
| | -4.5 | -0.2 | 0.2 | -0.5 | -1.0 | 100 | 11 | - |
| | -4.0 | -0.7 | 0.2 | -2.7 | -2.4 | '80 | 3 | + |
| Octylsalate | -7.5 | 0.3 | 0.3 | 10.6 | 0.4 | 99 | 7 | - |
| | -7.0 | 0.0 | 0.3 | 6.1 | 0.2 | 97 | 9 | - |
| | -6.5 | 0.2 | 0.2 | 0.9 | 0.3 | 98 | 8 | - |
| | -6.0 | 0.1 | 0.4 | 4.2 | -0.3 | 97 | 5 | - |
| | -5.5 | 0.4 | 0.2 | 2.1 | 0.8 | 92 | 6 | - |
| | -5.0 | -0.2 | 0.2 | 4.8 | 1.4 | 88 | 6 | - |
| | -4.5 | -0.5 | 0.2 | 0.4 | -0.5 | 87 | 9 | - |
| | -4.0 | -0.7 | 0.1 | -0.7 | -1.2 | 84 | 4 | + |
| Octocrylene | -7.5 | 0.0 | 0.2 | 7.0 | -5.6 | 104 | 3 | - |
| | -7.0 | 0.0 | 0.3 | 2.7 | -5.3 | 104 | 5 | - |
| | -6.5 | 0.3 | 0.3 | 8.4 | -5.5 | 103 | 6 | - |
| | -6.0 | -0.3 | 0.1 | 8.1 | -4.7 | 101 | 6 | - |
| | -5.5 | -0.4 | 0.2 | 9.6 | -5.1 | 97 | 3 | - |
| | -5.0 | -1.1 | 0.1 | -1.0 | -5.9 | 94 | 4 | - |
| | -4.5 | * | * | * | * | **67 | **3 | - |
| | -4.0 | * | * | * | * | **55 | **2 | - |
| Oxybenzone | -7.5 | 0.1 | 0.4 | 3.4 | -4.8 | 99 | 3 | - |
| | -7.0 | 0.0 | 0.1 | 1.1 | -4.6 | 101 | 4 | - |
| | -6.5 | 0.2 | 0.4 | 2.1 | -4.8 | 97 | 3 | - |
| | -6.0 | -0.3 | 0.2 | -4.8 | -5.3 | 97 | 4 | - |
| | -5.5 | 0.0 | 0.1 | 0.9 | -3.7 | 97 | 5 | - |
| | -5.0 | -0.2 | 0.2 | 0.7 | -4.8 | 96 | 5 | - |
| | -4.5 | -0.3 | 0.2 | -1.8 | -5.3 | 92 | 4 | - |
| | -4.0 | * | * | * | * | **#80 | **4 | - |

RTA = Relative Transcriptional Activation
PC = Positive Control (10 nM DHT)
VC = Vehicle Control
SD = Standard Deviation
+ = Precipitation observed
- = No precipitation observed
* = data not evaluated due to observed Cytotoxicity
** = Cytotoxicity observed
'= true value 80.38
#= true value 79.96

**TABLE 3 Results of 2nd Valid Transcriptional Activation Assay Agonist (Continued)**

| Chemical | Concentration (M) | RTA (% of PC) | | RTA with Nil (% of PC) | | Cell Viability (% of VC) | |
|---|---|---|---|---|---|---|---|
| | | Mean | SD | Value 1 | Value 2 | Mean | SD |
| DHT | -11.5 | 0.8 | 0.2 | 6.3 | -1.2 | 102 | 5 |
| | -11 | 1.3 | 0.3 | -2.0 | -1.9 | 101 | 7 |
| | -10.5 | 6.6 | 1.1 | 4.6 | -1.2 | 98 | 5 |
| | -10 | 29.4 | 3.6 | 4.7 | -0.9 | 104 | 6 |
| | -9.5 | 81.8 | 7.0 | -0.4 | 0.0 | 103 | 7 |
| | -9 | 107.3 | 11.9 | 10.9 | 2.2 | 102 | 6 |
| | -8.5 | 115.6 | 10.4 | 20.7 | 7.0 | 103 | 6 |
| | -8 | 113.8 | 6.5 | 58.4 | 33.9 | 98 | 4 |
| Nil | -7.5 | -0.3 | 0.1 | 0.3 | -0.1 | 102 | 2 |
| | -7.0 | -0.7 | 0.1 | 0.1 | -0.3 | 103 | 7 |
| | -6.5 | -0.6 | 0.1 | 0.6 | 0.1 | 92 | 4 |
| | -6.0 | -0.8 | 0.2 | 0.9 | -0.2 | 99 | 5 |
| | -5.5 | -0.2 | 0.2 | 1.7 | 1.5 | 96 | 6 |
| | -5.0 | 0.5 | 0.1 | 4.7 | 1.3 | 99 | 5 |
| | -4.5 | 2.4 | 0.4 | 1.4 | 0.5 | 83 | 4 |
| | -4.0 | * | * | * | * | **66 | **3 |
| ppDDE | -7.5 | -0.1 | 0.3 | 10.2 | -9.2 | 101 | 8 |
| | -7.0 | -0.2 | 0.3 | -11.4 | -11.2 | 101 | 8 |
| | -6.5 | 0.2 | 0.2 | 5.2 | -10.8 | 101 | 13 |
| | -6.0 | -0.2 | 0.2 | -11.2 | -10.2 | 102 | 11 |
| | -5.5 | 0.4 | 0.2 | 2.8 | -7.8 | 93 | 8 |
| | -5.0 | 0.8 | 0.5 | 11.3 | -8.3 | 92 | 8 |
| | -4.5 | 1.5 | 0.2 | 4.8 | -9.1 | 96 | 6 |
| | -4.0 | * | * | * | * | **66 | **3 |

RTA = Relative Transcriptional Activation
PC = Positive Control (10 nM DHT)
VC = Vehicle Control
SD = Standard Deviation
+ = Precipitation observed
- = No precipitation observed
* = data not evaluated due to observed Cytotoxicity
** = Cytotoxicity observed

## TABLE 4 Results of 2nd Valid Transcriptional Activation Assay Antagonist

| Chemical | Concentration (LogM) | Low Agonist Maximal Induction Antagonism (%) | | High Agonist Maximum Induction (1000 nM DHT) (%) | | Differential |
|---|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD | |
| **10 nM DHT** | | 110.0 | 6.2 | 105.7 | 8.7 | |
| **VC** | | 0.0 | 0.2 | 95.2 | 15.4 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 11.5 | 104.8 | 4.1 | |
| **Octylmethoxycinnamate** | -7.5 | 94.1 | 13.6 | 98.2 | 9.2 | 4.1 |
| | -7.0 | 97.8 | 11.1 | 104.4 | 2.7 | 6.6 |
| | -6.5 | 97.3 | 15.6 | 102.3 | 11.8 | 5.0 |
| | -6.0 | 83.2 | 15.5 | 90.3 | 17.5 | 7.1 |
| | -5.5 | 99.9 | 4.8 | 92.1 | 10.1 | -7.7 |
| | -5.0 | 90.8 | 13.2 | 91.5 | 21.3 | 0.8 |
| | -4.5 | 83.3 | 10.4 | 85.2 | 15.6 | 1.9 |
| | -4.0 | 44.3 | 4.7 | 45.2 | 10.6 | 0.9 |
| **10 nM DHT** | | 119.7 | 10.2 | 118.4 | 5.9 | |
| **VC** | | 0.0 | 0.5 | 108.3 | 9.5 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 11.5 | 91.7 | 6.2 | |
| **Octylsalate** | -7.5 | 107.7 | 16.0 | 97.6 | 4.8 | -10.1 |
| | -7.0 | 98.5 | 15.5 | 83.4 | 8.6 | -15.1 |
| | -6.5 | 115.2 | 17.9 | 98.0 | 5.5 | -17.2 |
| | -6.0 | 97.6 | 10.6 | 95.2 | 3.9 | -2.3 |
| | -5.5 | 132.7 | 18.3 | 108.3 | 9.8 | -24.3 |
| | -5.0 | 117.4 | 13.8 | 118.5 | 5.2 | 1.2 |
| | -4.5 | 124.6 | 12.5 | 135.6 | 13.8 | 11.0 |
| | -4.0 | 76.6 | 48.2 | 128.1 | 27.0 | #51.6 |
| **10 nM DHT** | | 90.6 | 14.1 | 109.8 | 7.8 | |
| **VC** | | 0.0 | 0.1 | 102.2 | 9.1 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 12.9 | 97.8 | 6.3 | |
| **Octocrylene** | -7.5 | 98.5 | 6.1 | 103.1 | 12.6 | 4.6 |
| | -7.0 | 100.2 | 6.3 | 99.8 | 8.4 | -0.3 |
| | -6.5 | 108.1 | 12.3 | 115.1 | 11.1 | 7.0 |
| | -6.0 | 94.6 | 6.8 | 106.1 | 8.2 | 11.5 |
| | -5.5 | 102.1 | 11.8 | 125.3 | 10.7 | 23.2 |
| | -5.0 | 62.6 | 3.9 | 112.7 | 14.6 | #50.1 |
| | -4.5 | * | * | * | * | * |
| | -4.0 | * | * | * | * | * |
| **10 nM DHT** | | 111.3 | 20.2 | 116.9 | 22.9 | |
| **VC** | | 0.0 | 0.5 | 99.2 | 14.0 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 19.2 | 100.8 | 12.3 | |
| **Oxybenzone** | -7.5 | 112.9 | 22.0 | 89.7 | 15.5 | -23.2 |
| | -7.0 | 108.9 | 24.2 | 87.3 | 4.2 | -21.6 |
| | -6.5 | 108.7 | 13.3 | 95.8 | 4.3 | -12.9 |
| | -6.0 | 109.5 | 10.2 | 107.8 | 9.7 | -1.7 |
| | -5.5 | 123.1 | 18.1 | 122.1 | 7.4 | -1.0 |
| | -5.0 | 123.5 | 17.6 | 157.6 | 11.1 | 34.1 |
| | -4.5 | 89.0 | 5.7 | 169.2 | 16.2 | #80.3 |
| | -4.0 | * | * | * | * | * |

VC = Vehicle Control
SD = Standard Deviation
* = data not evaluated due to observed Cytotoxicity, Cytotoxicity values shown on corresponding agonist table
shaded areas = does not apply
# = differential > 50

## TABLE 4 Results of 2nd Valid Transcriptional Activation Assay Antagonist (Continued)

| Chemical | Concentration (LogM) | Low Agonist Maximal Induction Antagonism (%) | | High Agonist Maximum Induction (1000 nM DHT) (%) | | Differential |
|---|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD | |
| **10 nM DHT** | | 103.9 | 8.5 | 87.7 | 4.1 | |
| **VC** | | 0.0 | 0.2 | 97.3 | 3.8 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 17.4 | 102.7 | 6.2 | |
| **DHT** | -11.5 | 102.7 | 7.2 | 100.8 | 6.6 | -1.9 |
| | -11 | 97.0 | 7.1 | 94.7 | 8.2 | -2.3 |
| | -10.5 | 112.9 | 9.4 | 107.2 | 9.4 | -5.7 |
| | -10 | 97.9 | 16.8 | 97.1 | 5.7 | -0.8 |
| | -9.5 | 125.9 | 10.3 | 115.3 | 3.7 | -10.6 |
| | -9 | 121.3 | 6.1 | 119.1 | 16.8 | -2.2 |
| | -8.5 | 137.3 | 26.7 | 118.5 | 3.7 | -18.9 |
| | -8 | 124.4 | 18.0 | 120.4 | 8.7 | -4.1 |
| **10 nM DHT** | | 119.4 | 15.5 | 106.2 | 12.5 | |
| **VC** | | 0.0 | 0.4 | 104.8 | 4.5 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 11.0 | 95.2 | 10.8 | |
| **Nil** | -7.5 | 102.8 | 13.8 | 108.8 | 16.1 | 6.0 |
| | -7.0 | 90.0 | 9.5 | 102.5 | 10.8 | 12.5 |
| | -6.5 | 67.2 | 14.8 | 102.9 | 5.5 | 35.7 |
| | -6.0 | 19.6 | 2.5 | 106.8 | 4.3 | #87.2 |
| | -5.5 | 6.5 | 0.7 | 119.6 | 6.0 | #113.1 |
| | -5.0 | 3.6 | 0.2 | 121.6 | 10.4 | #118.0 |
| | -4.5 | 3.7 | 0.9 | 78.2 | 3.4 | #74.5 |
| | -4.0 | * | * | * | * | * |
| **10 nM DHT** | | 114.2 | 10.7 | 129.3 | 20.6 | |
| **VC** | | 0.0 | 0.2 | 99.8 | 10.7 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 19.4 | 100.2 | 7.9 | |
| **ppDDE** | -7.5 | 90.4 | 11.2 | 101.1 | 4.3 | 10.7 |
| | -7.0 | 87.2 | 12.5 | 91.6 | 8.2 | 4.4 |
| | -6.5 | 101.3 | 7.9 | 103.8 | 9.5 | 2.5 |
| | -6.0 | 95.3 | 13.7 | 101.5 | 9.7 | 6.2 |
| | -5.5 | 94.4 | 5.5 | 110.7 | 18.4 | 16.3 |
| | -5.0 | 58.7 | 8.2 | 119.3 | 6.0 | #60.6 |
| | -4.5 | 27.4 | 2.4 | 133.2 | 9.9 | #105.9 |
| | -4.0 | * | * | * | * | * |

VC = Vehicle Control
SD = Standard Deviation
* = data not evaluated due to observed Cytotoxicity, Cytotoxicity values shown on corresponding agonist table
shaded areas = does not apply
# = differential > 50

## TABLE 5 Results of 3rd Valid Transcriptional Activation Assay Agonist

| Chemical | Concentration (M) | RTA (% of PC) | | RTA with Nil (% of PC) | | Cell Viability (% of VC) | | Precipitation | |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | SD | Value 1 | Value 2 | Mean | SD | Value 1 | Value 2 |
| Octylmethoxycinnamate | -7.5 | | | | | | | 0.3 | 0.3 |
| | -7.0 | | | | | | | 0.2 | 0.3 |
| | -6.5 | | | | | | | 0.2 | 0.3 |
| | -6.0 | | | | | | | 0.3 | 0.4 |
| | -5.5 | | | | | | | 0.4 | 0.3 |
| | -5.0 | | | | | | | 0.3 | 0.3 |
| | -4.5 | | | | | | | 0.6 | 0.7 |
| | -4.0 | | | | | | | +1.9 | +2.1 |
| Octylsalate | -7.5 | -0.1 | 0.3 | 8.4 | -0.3 | 109 | 7 | 0.2 | 0.3 |
| | -7.0 | 0.0 | 0.3 | 4.3 | -1.4 | 109 | 4 | 0.2 | 0.2 |
| | -6.5 | 0.3 | 0.4 | 0.6 | -0.8 | 113 | 3 | 0.2 | 0.3 |
| | -6.0 | -0.1 | 0.4 | 1.2 | -1.0 | 112 | 6 | 0.2 | 0.3 |
| | -5.5 | 0.5 | 0.3 | 0.6 | 0.1 | 104 | 6 | 0.3 | 0.4 |
| | -5.0 | 0.3 | 0.2 | 39.0 | -0.3 | 110 | 7 | 0.3 | 0.2 |
| | -4.5 | 0.1 | 0.3 | 11.0 | 0.1 | 112 | 7 | 0.5 | 0.6 |
| | -4.0 | 0.0 | 0.2 | 0.1 | -1.0 | 88 | 9 | +0.9 | +1.2 |
| | -3.5 | | | | | | | +1.7 | +1.6 |
| | -3.0 | | | | | | | +0.7 | +1.1 |
| Octocrylene | -7.5 | 0.3 | 0.4 | 6.5 | -2.2 | 111 | 3 | 0.4 | 0.2 |
| | -7.0 | 0.3 | 0.4 | 7.8 | -1.4 | 108 | 6 | 0.3 | 0.2 |
| | -6.5 | 0.3 | 0.3 | 1.6 | -2.6 | 116 | 7 | 0.2 | 0.3 |
| | -6.0 | 0.1 | 0.1 | -0.4 | -5.7 | 115 | 4 | 0.3 | 0.2 |
| | -5.5 | 0.5 | 0.2 | 1.4 | -1.0 | 110 | 6 | 0.2 | 0.2 |
| | -5.0 | 0.1 | 0.2 | 7.1 | -1.6 | 107 | 7 | 0.3 | 0.3 |
| | -4.5 | -0.6 | 0.1 | -0.9 | -4.1 | 90 | 9 | +4.1 | +4.4 |
| | -4.0 | * | * | * | * | **66 | **3 | +28.0 | +29.1 |
| | -3.5 | | | | | | | +23.9 | +25.5 |
| | -3.0 | | | | | | | +19.2 | +20.4 |
| Oxybenzone | -7.5 | 0.1 | 0.2 | 5.7 | -2.4 | 116 | 3 | 0.3 | 0.3 |
| | -7.0 | 0.1 | 0.3 | 5.7 | -2.2 | 107 | 29 | 0.6 | 0.3 |
| | -6.5 | 0.6 | 0.4 | -0.7 | -2.7 | 120 | 12 | 0.3 | 0.3 |
| | -6.0 | 0.1 | 0.3 | -1.9 | -2.5 | 121 | 8 | 0.2 | 0.3 |
| | -5.5 | 0.8 | 0.5 | 0.3 | -1.6 | 116 | 12 | 0.3 | 0.4 |
| | -5.0 | 0.5 | 0.3 | -0.2 | -1.0 | 121 | 9 | 0.3 | 0.3 |
| | -4.5 | 0.2 | 0.2 | 5.5 | -2.3 | 124 | 7 | 0.3 | 0.3 |
| | -4.0 | 0.2 | 0.2 | -2.0 | -3.2 | 97 | 18 | 0.3 | 0.3 |
| | -3.5 | | | | | | | 0.4 | 0.5 |
| | -3.0 | | | | | | | 0.3 | 0.5 |

RTA = Relative Transcriptional Activation
PC = Positive Control (10 nM DHT)
VC = Vehicle Control
SD = Standard Deviation
+ = Precipitation ≥ 3 times vehicle control
* = data not evaluated due to observed Cytotoxicity
** = Cytotoxicity observed
shaded areas not evaluated

## TABLE 5 Results of 3rd Valid Transcriptional Activation Assay Agonist (Continued)

| Chemical | Concentration (M) | RTA (% of PC) | | RTA with Nil (% of PC) | | Cell Viability (% of VC) | |
|---|---|---|---|---|---|---|---|
| | | Mean | SD | Value 1 | Value 2 | Mean | SD |
| DHT | -11.5 | 0.4 | 0.3 | 0.5 | -0.8 | 100 | 9 |
| | -11 | 1.6 | 0.4 | 1.3 | -0.5 | 106 | 11 |
| | -10.5 | 7.2 | 2.0 | 6.2 | 0.1 | 108 | 14 |
| | -10 | 28.2 | 5.9 | 4.6 | -0.6 | 106 | 12 |
| | -9.5 | 81.2 | 6.7 | 9.7 | 0.9 | 103 | 14 |
| | -9 | 118.0 | 12.3 | 4.3 | 3.2 | 107 | 6 |
| | -8.5 | 144.3 | 22.2 | 14.5 | 5.8 | 117 | 7 |
| | -8 | 140.0 | 28.8 | 38.3 | 27.1 | 98 | 7 |
| Nil | -7.5 | -0.4 | 0.2 | 2.7 | -1.3 | 98 | 10 |
| | -7.0 | -0.3 | 0.3 | 2.2 | -0.5 | 101 | 13 |
| | -6.5 | -0.2 | 0.2 | -0.3 | -1.2 | 101 | 10 |
| | -6.0 | -0.3 | 0.4 | -0.5 | -1.7 | 92 | 7 |
| | -5.5 | 0.4 | 0.4 | 2.0 | -0.6 | 98 | 10 |
| | -5.0 | 1.9 | 0.5 | 2.9 | 1.6 | 97 | 11 |
| | -4.5 | 2.9 | 0.5 | -0.1 | -0.8 | 95 | 3 |
| | -4.0 | * | * | * | * | **56 | **4 |
| ppDDE | -7.5 | 0.0 | 0.3 | -2.0 | -3.1 | 106 | 13 |
| | -7.0 | 0.3 | 0.2 | 1.0 | -2.8 | 108 | 9 |
| | -6.5 | 0.4 | 0.4 | -1.4 | -2.1 | 113 | 15 |
| | -6.0 | 0.1 | 0.4 | -1.3 | -2.5 | 117 | 16 |
| | -5.5 | 1.2 | 0.5 | 0.9 | -0.9 | 110 | 16 |
| | -5.0 | 1.9 | 0.8 | 2.9 | -0.9 | 103 | 16 |
| | -4.5 | 2.2 | 0.5 | 0.6 | -0.8 | 118 | 11 |
| | -4.0 | * | * | * | * | **68 | **5 |

RTA = Relative Transcriptional Activation
PC = Positive Control (10 nM DHT)
VC = Vehicle Control
SD = Standard Deviation
+ = Precipitation observed
- = No precipitation observed
* = data not evaluated due to observed Cytotoxicity
** = Cytotoxicity observed

## TABLE 6 Results of 3rd Valid Transcriptional Activation Assay Antagonist

| Chemical | Concentration (LogM) | Low Agonist Maximal Induction Antagonism (%) | | High Agonist Maximum Induction (1000 nM DHT) (%) | | Differential |
|---|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD | |
| **10 nM DHT** | | 110.8 | 75.8 | 119.5 | 8.0 | |
| **VC** | | 0.0 | 0.3 | 101.9 | 11.8 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 18.1 | 98.1 | 15.5 | |
| **Octylsalate** | -7.5 | 108.7 | 11.0 | 105.2 | 13.7 | -3.5 |
| | -7.0 | 111.3 | 21.0 | 104.3 | 22.8 | -7.0 |
| | -6.5 | 115.0 | 29.5 | 112.1 | 24.8 | -2.9 |
| | -6.0 | 119.0 | 36.7 | 107.9 | 17.4 | -11.1 |
| | -5.5 | 140.3 | 24.2 | 133.1 | 31.4 | -7.2 |
| | -5.0 | 132.1 | 15.3 | 118.9 | 20.6 | -13.2 |
| | -4.5 | 122.7 | 24.4 | 146.4 | 38.6 | 23.7 |
| | -4.0 | 91.0 | 23.9 | 157.6 | 32.2 | #66.6 |
| **10 nM DHT** | | | | | | |
| **VC** | | 0.0 | 0.2 | 95.9 | 10.8 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 22.9 | 104.1 | 15.0 | |
| **Octocrylene** | -7.5 | 96.8 | 23.7 | 107.4 | 13.5 | 10.5 |
| | -7.0 | 109.7 | 20.0 | 101.7 | 18.4 | -8.0 |
| | -6.5 | 117.6 | 29.7 | 123.8 | 32.3 | 6.2 |
| | -6.0 | 111.4 | 27.3 | 94.2 | 14.5 | -17.2 |
| | -5.5 | 105.0 | 26.2 | 125.4 | 23.6 | 20.4 |
| | -5.0 | 73.5 | 16.0 | 133.4 | 8.9 | #59.9 |
| | -4.5 | 21.6 | 6.8 | 91.4 | 20.1 | #69.8 |
| | -4.0 | * | * | * | * | * |
| **10 nM DHT** | | | | | | |
| **VC** | | 0.0 | 0.3 | 103.7 | 9.5 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 21.0 | 96.3 | 27.5 | |
| **Oxybenzone** | -7.5 | 97.2 | 20.4 | 101.2 | 19.9 | 4.0 |
| | -7.0 | 96.7 | 20.4 | 96.2 | 40.1 | -0.5 |
| | -6.5 | 119.8 | 31.5 | 103.9 | 40.7 | -15.9 |
| | -6.0 | 101.9 | 25.6 | 111.0 | 58.7 | 9.1 |
| | -5.5 | 134.8 | 28.6 | 133.8 | 62.8 | -1.1 |
| | -5.0 | 124.0 | 18.5 | 152.0 | 71.6 | 28.0 |
| | -4.5 | 75.6 | 10.1 | 176.5 | 24.7 | #100.9 |
| | -4.0 | 29.5 | 7.0 | 198.5 | 40.7 | #169.0 |

VC = Vehicle Control
SD = Standard Deviation
* = data not evaluated due to observed Cytotoxicity, Cytotoxicity values shown on corresponding agonist table
shaded areas = does not apply
# = differential > 50

## TABLE 6 Results of 3rd Valid Transcriptional Activation Assay Antagonist (Continued)

| Chemical | Concentration (LogM) | Low Agonist Maximal Induction Antagonism (%) | | High Agonist Maximum Induction (1000 nM DHT) (%) | | Differential |
|---|---|---|---|---|---|---|
| | | Mean | SD | Mean | SD | |
| **10 nM DHT** | | 115.8 | 24.0 | 118.0 | 12.7 | |
| **VC** | | 0.0 | 0.1 | 104.3 | 22.5 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 17.0 | 95.7 | 19.2 | |
| **DHT** | -11.5 | 117.0 | 18.4 | 97.7 | 19.3 | -19.2 |
| | -11 | 109.1 | 9.9 | 119.5 | 17.4 | 10.4 |
| | -10.5 | 130.6 | 33.6 | 115.7 | 32.0 | -15.0 |
| | -10 | 113.1 | 18.3 | 117.1 | 32.9 | 3.9 |
| | -9.5 | 128.4 | 34.6 | 119.0 | 24.8 | -9.4 |
| | -9 | 155.4 | 18.0 | 122.9 | 11.3 | -32.5 |
| | -8.5 | 161.9 | 13.4 | 127.6 | 26.1 | -34.3 |
| | -8 | 140.0 | 25.7 | 118.6 | 16.2 | -21.4 |
| **10 nM DHT** | | 122.9 | 15.1 | 110.2 | 12.3 | |
| **VC** | | 0.0 | 0.5 | 102.7 | 10.2 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 16.9 | 97.3 | 16.2 | |
| **Nil** | -7.5 | 105.3 | 4.3 | 107.9 | 6.1 | 2.7 |
| | -7.0 | 77.3 | 8.8 | 113.8 | 6.0 | 36.5 |
| | -6.5 | 56.2 | 6.1 | 116.4 | 17.6 | #60.3 |
| | -6.0 | 16.7 | 3.6 | 108.2 | 13.0 | #91.6 |
| | -5.5 | 8.8 | 2.3 | 123.6 | 14.9 | #114.8 |
| | -5.0 | 6.1 | 1.3 | 115.0 | 9.9 | #108.8 |
| | -4.5 | 6.9 | 1.2 | 74.8 | 19.7 | #68.0 |
| | -4.0 | * | * | * | * | * |
| **10 nM DHT** | | 122.7 | 19.8 | 110.2 | 15.6 | |
| **VC** | | 0.0 | 0.1 | 103.6 | 25.6 | |
| **Induced Controls (1nM DHT)** | | 100.0 | 23.0 | 96.4 | 23.6 | |
| **ppDDE** | -7.5 | 110.5 | 15.5 | 95.8 | 19.7 | -14.7 |
| | -7.0 | 106.0 | 10.8 | 87.5 | 16.9 | -18.6 |
| | -6.5 | 120.1 | 24.1 | 105.6 | 25.9 | -14.5 |
| | -6.0 | 100.2 | 18.8 | 98.5 | 28.0 | -1.6 |
| | -5.5 | 102.1 | 23.2 | 114.0 | 35.1 | 12.0 |
| | -5.0 | 62.6 | 13.0 | 118.3 | 26.0 | #55.7 |
| | -4.5 | 31.0 | 3.1 | 112.5 | 30.1 | #81.5 |
| | -4.0 | * | * | * | * | * |

VC = Vehicle Control
SD = Standard Deviation
* = data not evaluated due to observed Cytotoxicity, Cytotoxicity values shown on corresponding agonist table
shaded areas = does not apply
# = differential > 50

## TABLE 7 $LogPC_{50}$, $LogPC_{10}$, $LogEC_{50}$ and Hill Slope Values for the Reference Chemicals

**Agonist**

| Name | $LogPC_{50}$ | | | $LogPC_{10}$ | | | $LogEC_{50}$ | | | Hill Slope | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay |
| DHT | -9.8 | -9.8 | -9.8 | -10.5 | -10.4 | -10.4 | -9.8 | -9.7 | -9.6 | 1.9 | 1.7 | 1.3 |
| Nil | - | - | - | - | - | - | - | - | - | - | - | - |
| ppDDE | - | - | - | - | - | - | - | - | - | - | - | - |

PC = Positive Control (10 nM DHT)

**Antagonist**

| Name | Differential $IC_{50}$ | | | Differential $IC_{30}$ | | | $LogEC_{50}$ | | | Hill Slope | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay |
| DHT | - | - | - | - | - | - | - | - | - | - | - | - |
| Nil | -6.6 | -6.4 | -6.7 | -6.9 | -6.6 | -7.1 | -6.4 | -6.4 | -6.7 | -1.5 | -1.6 | -0.9 |
| ppDDE | -5.0 | -5.1 | -5.1 | -5.3 | -5.3 | -5.3 | -4.9 | -4.8 | -4.9 | -1.3 | -1.5 | -1.3 |

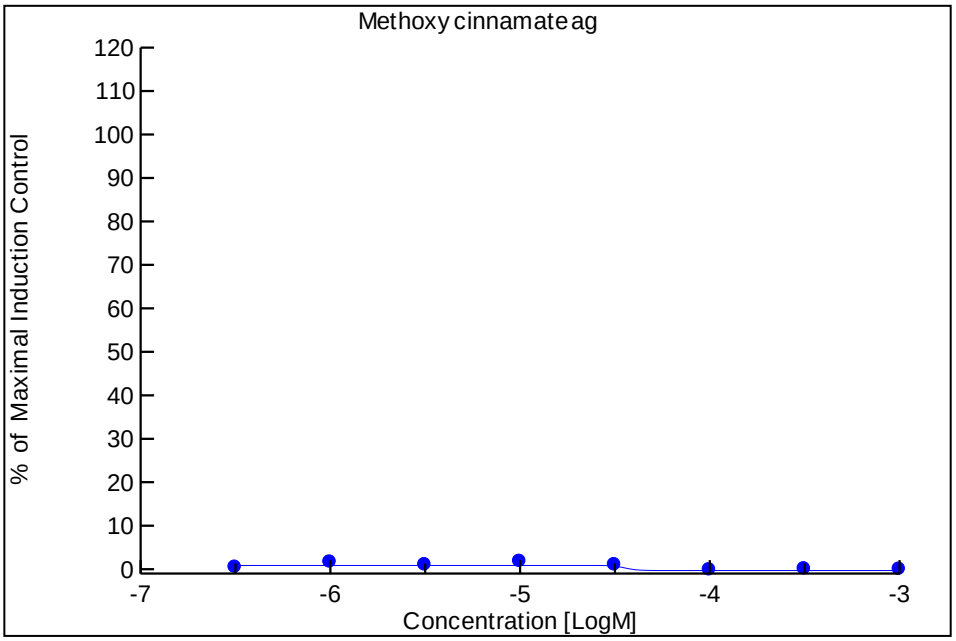
Differential = High agonist minus low agonist
Differential $IC_{50}$ = concentration at which the high agonist minus low agonist is 50%

| Name | Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|---|
| | 1st Valid Assay | 2nd Valid Assay | 3rd Valid Assay |
| DHT | - | - | - |
| Nil | 96.5 | 96.4 | 93.9 |
| ppDDE | 74.7 | 72.6 | 69.0 |

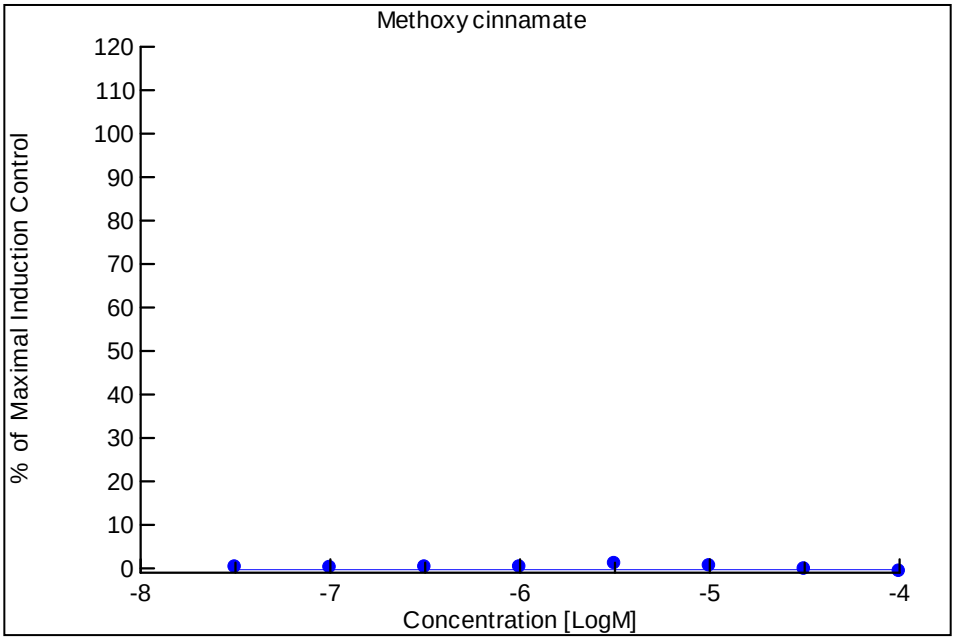
# FIGURES SECTION

## FIGURE 1 Octylmethoxycinnamate – Agonist

**13Oct2011**



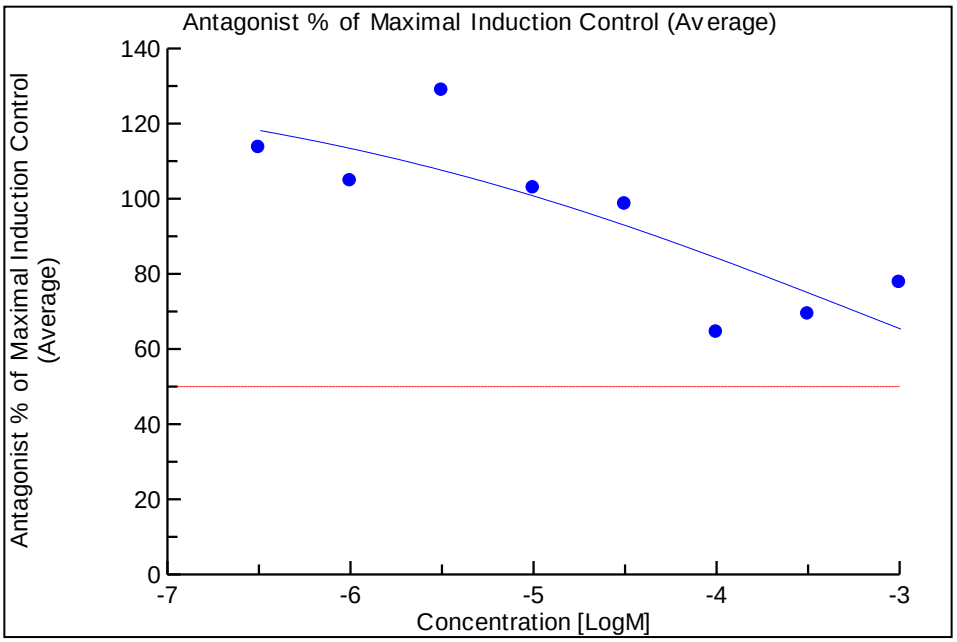

**20Oct2011**

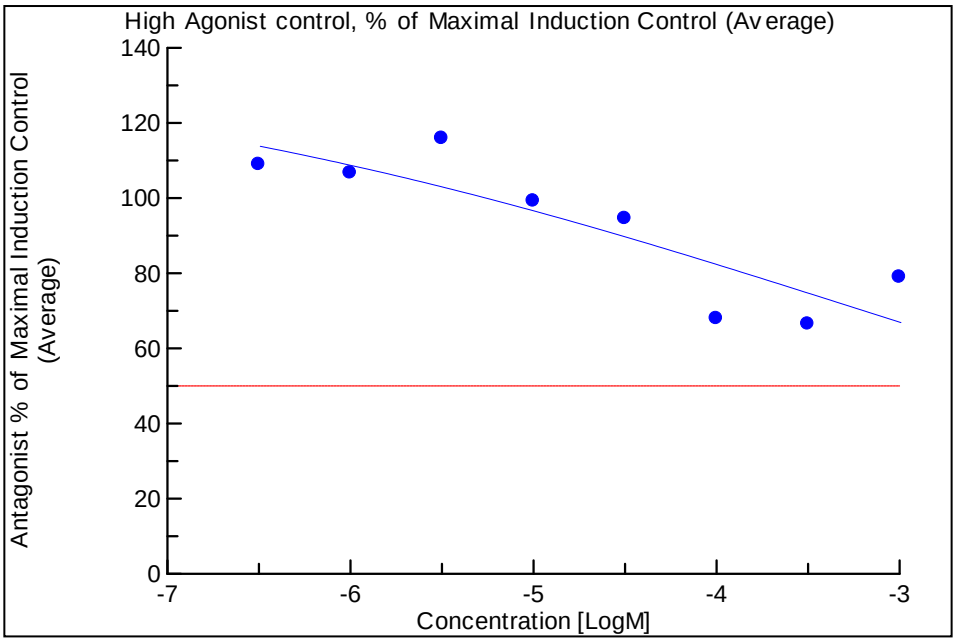



The two separate graphs represent the data (Means±Standard Deviation) from the two different independent runs of the assay in the absence of antagonist (n =6/concentration).

## FIGURE 2 Octylmethoxycinnamate – Antagonist

**13Oct2011**

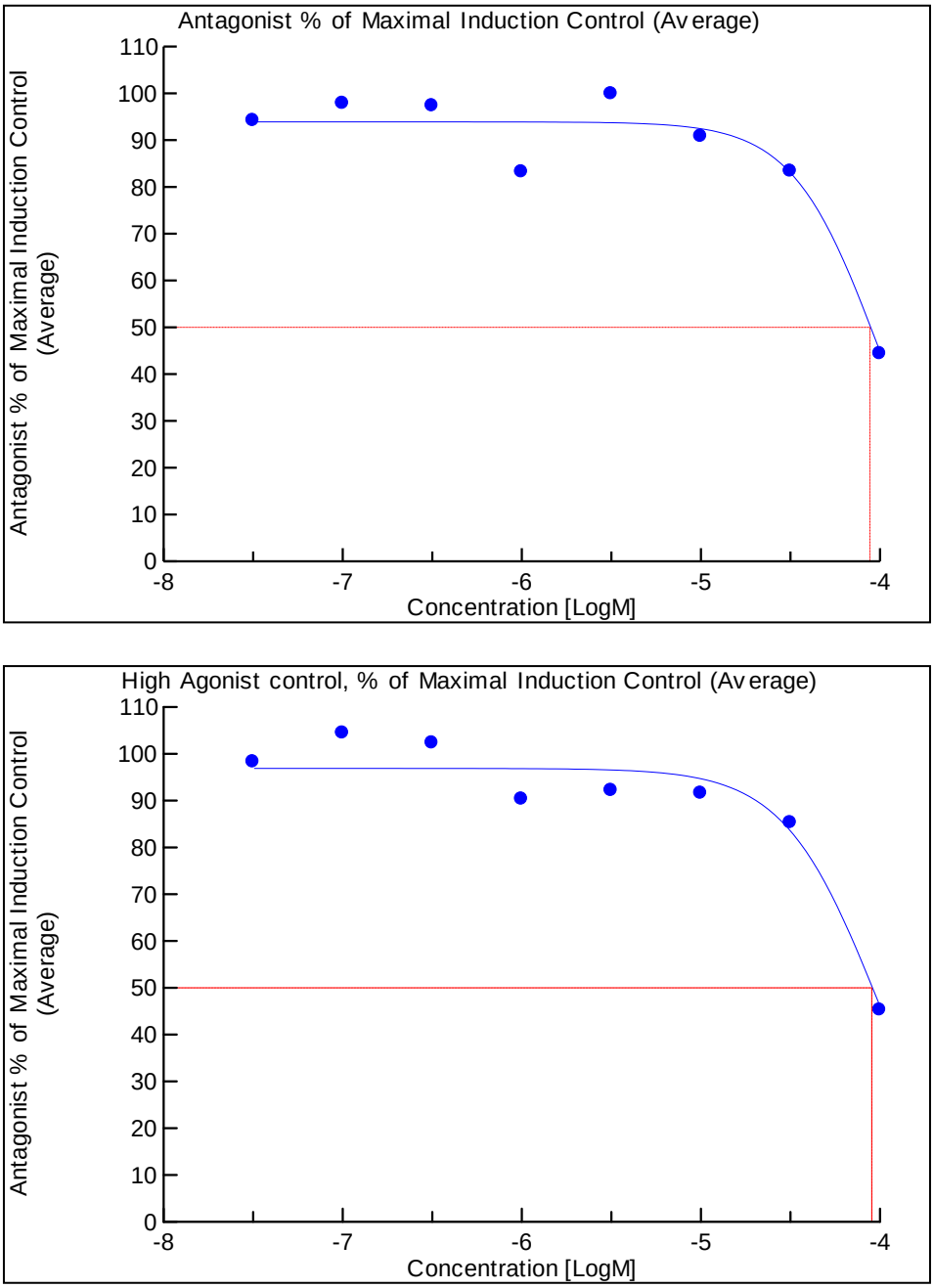



The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT.

## FIGURE 2 Octylmethoxycinnamate – Antagonist (Continued)

**20Oct2011**



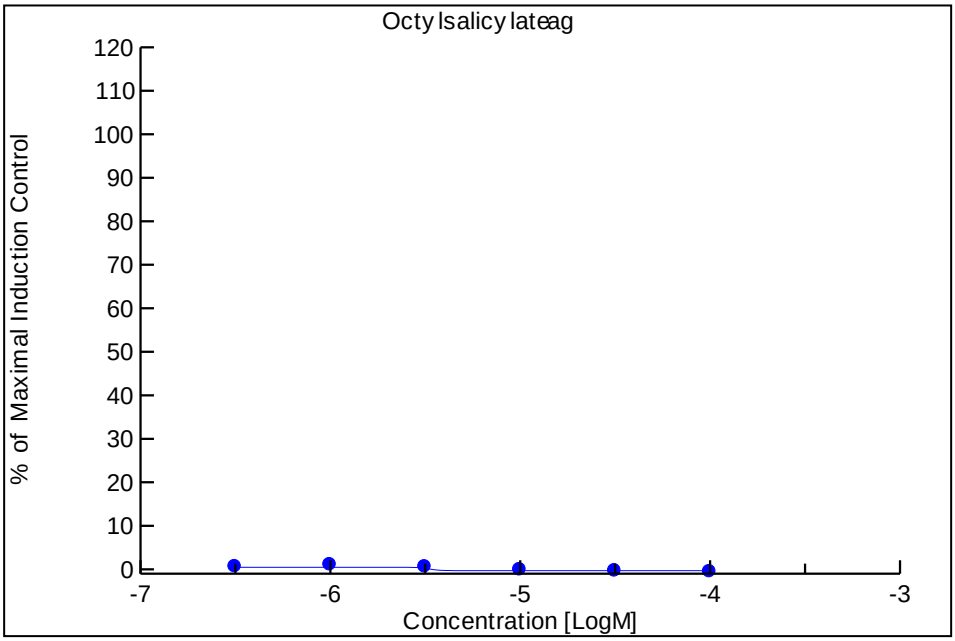




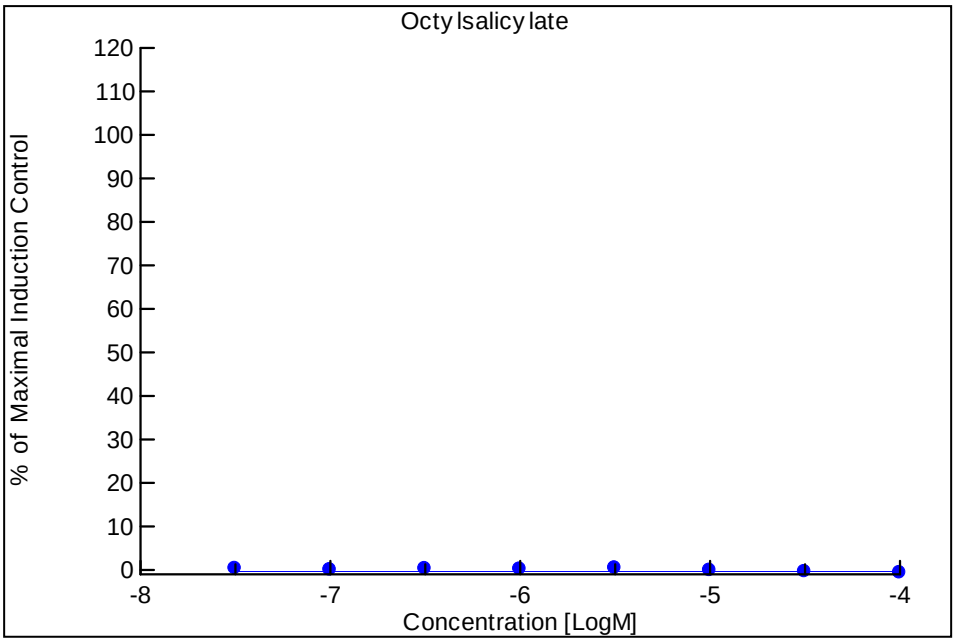
The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT.

## FIGURE 3 Octylsalate – Agonist

**13Oct2011**



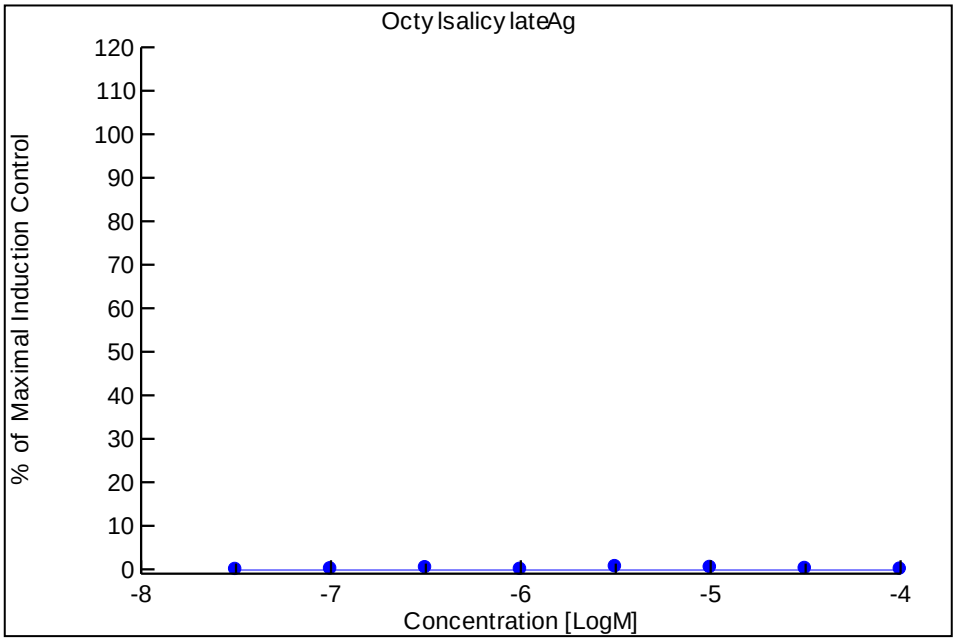

**20Oct2011**




The two separate graphs represent the data (Means±Standard Deviation) from the two different independent runs of the assay in the absence of antagonist (n =6/concentration). The limit of cyotoxicity was -4.0 logM in run one.

## FIGURE 3 Octylsalate – Agonist (Continued)

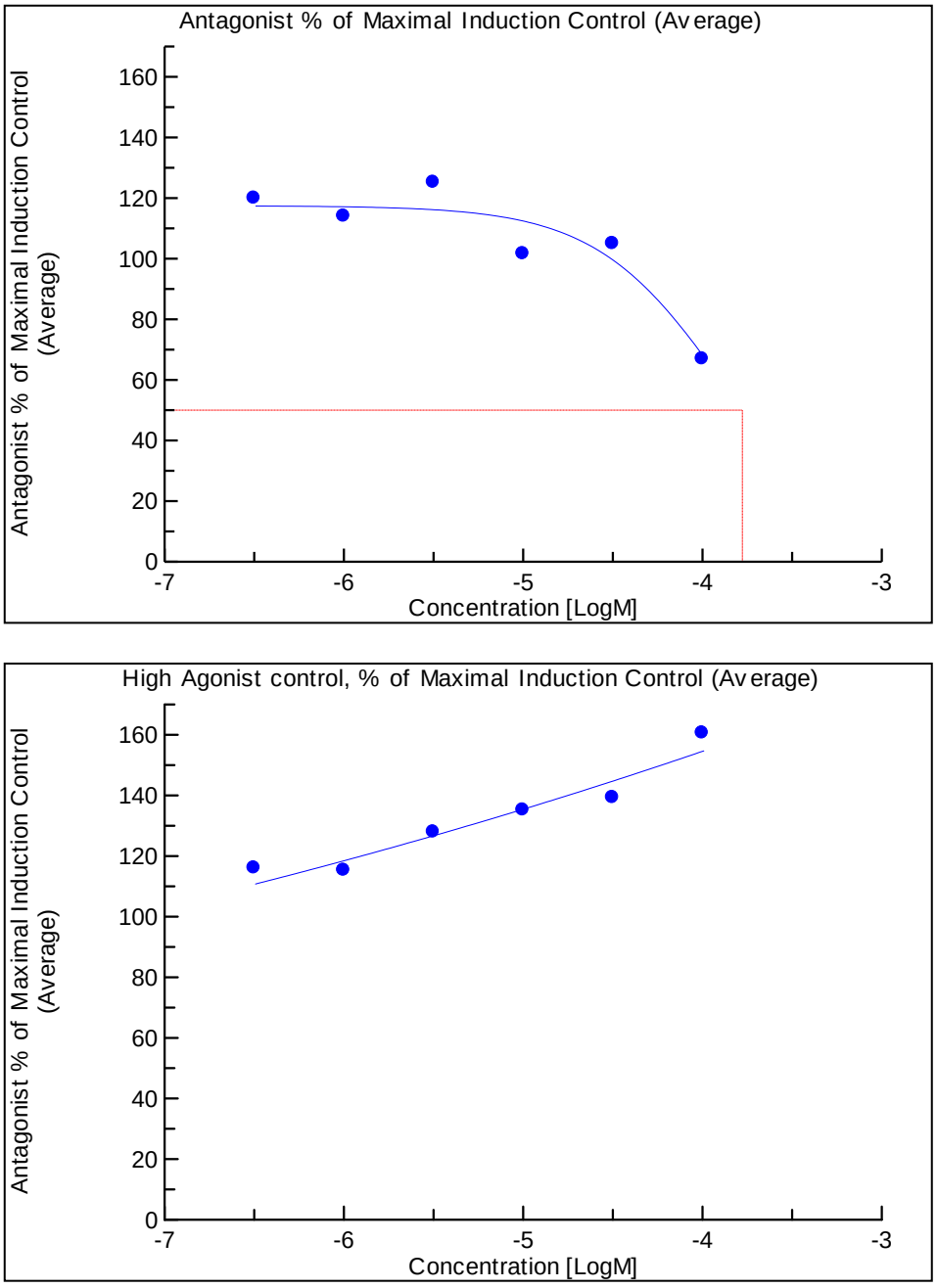
**3Nov2011**




The graph represents the data (Means±Standard Deviation) from an independent runs of the assay in the absence of antagonist (n =6/concentration).

## FIGURE 4 Octylsalate – Antagonist

**13Oct2011**



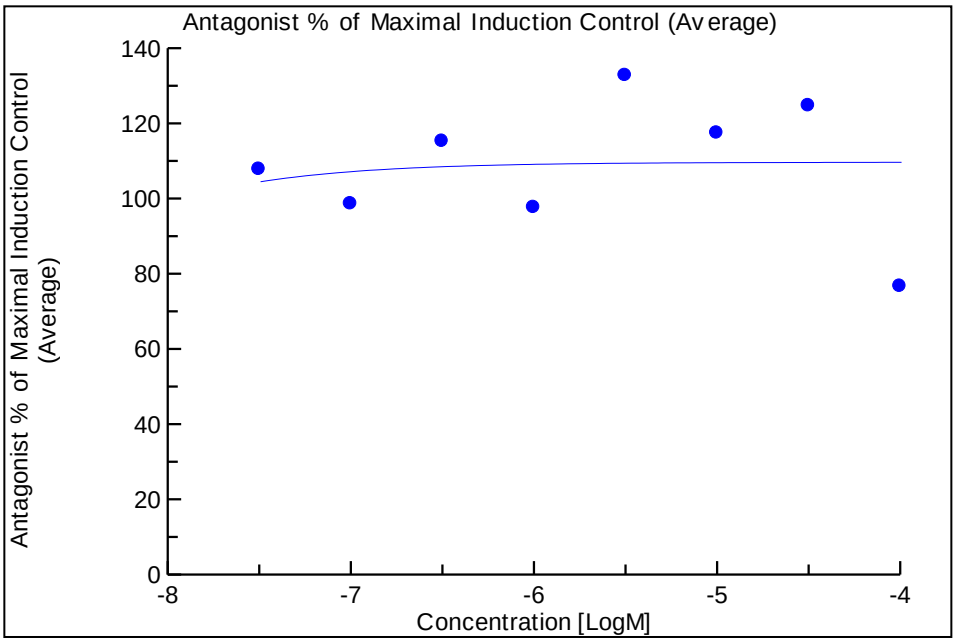


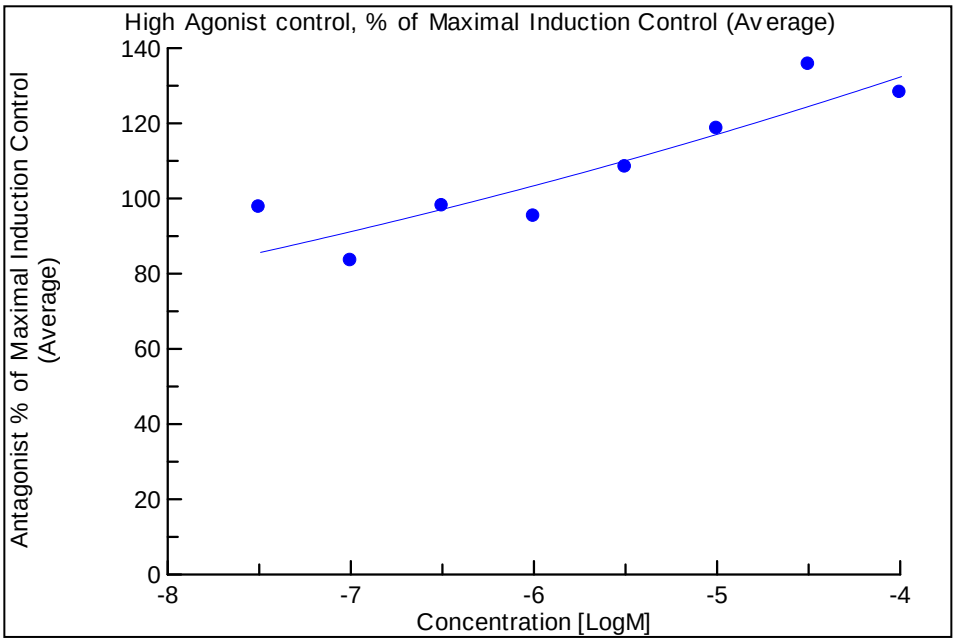


The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The limit of cyotoxicity was -4.0 logM.

## FIGURE 4 Octylsalate – Antagonist (Continued)

**20Oct2011**

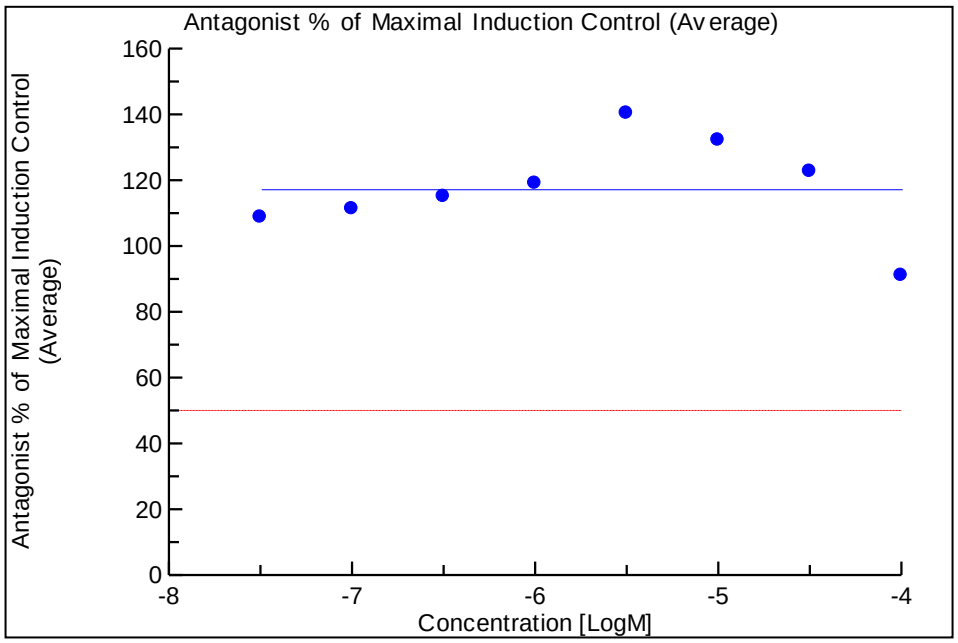


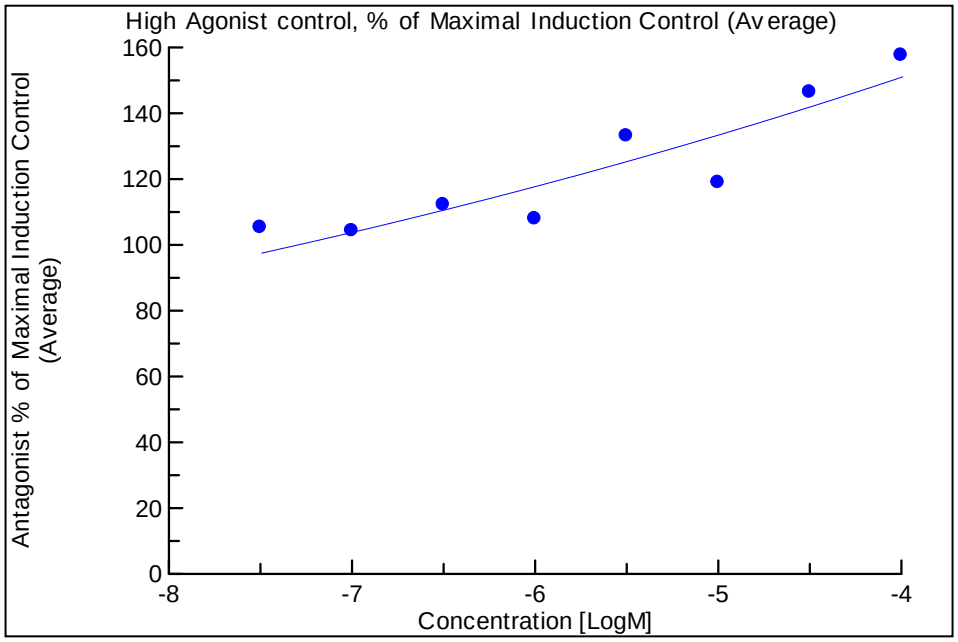




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT.

## FIGURE 4 Octylsalate – Antagonist (Continued)

**3Nov2011**

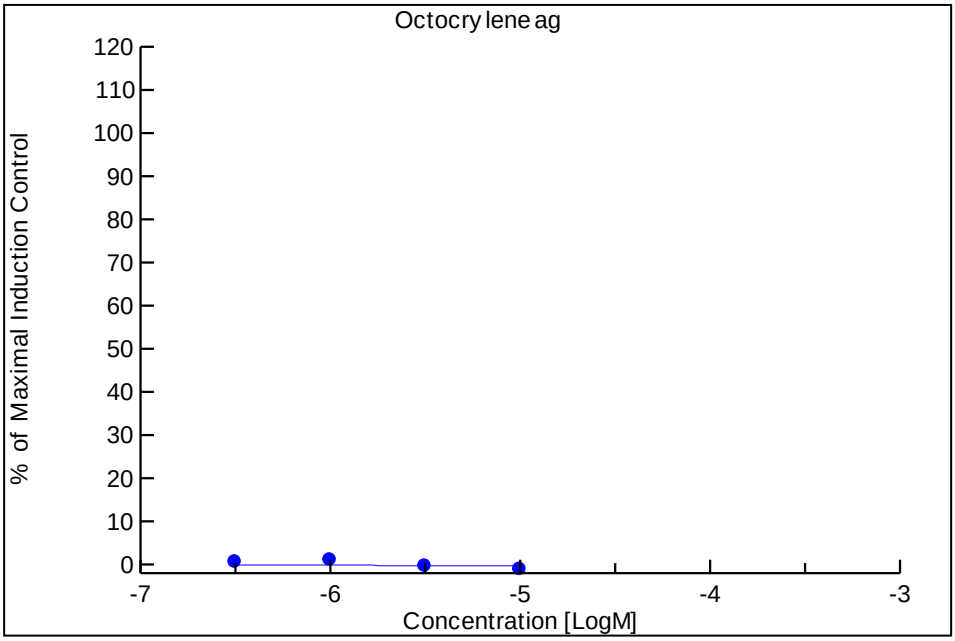


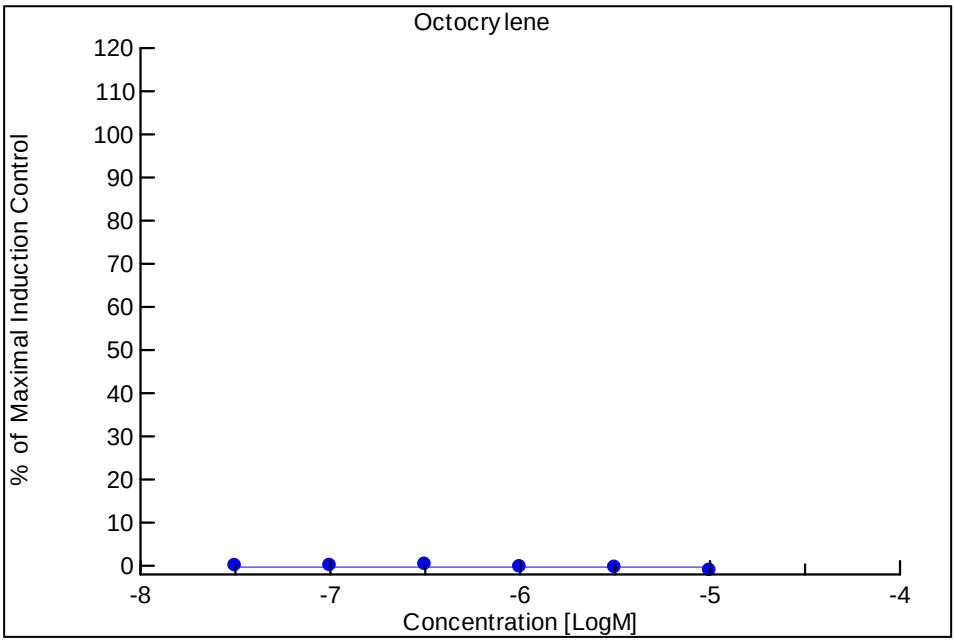

The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT.

## FIGURE 5 Octocrylene – Agonist

**13Oct2011**



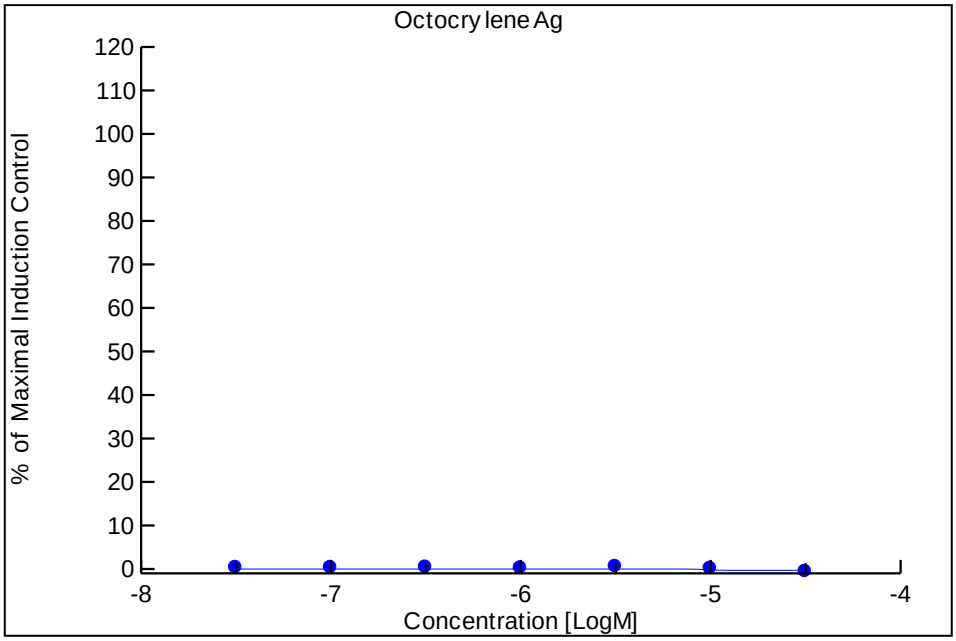

**20Oct2011**




The two separate graphs represent the data (Means±Standard Deviation) from the two different independent runs of the assay in the absence of antagonist (n =6/concentration). The limit of cytotoxicity was -5.0 logM for runs one and two.

## FIGURE 5 Octocrylene – Agonist (Continued)

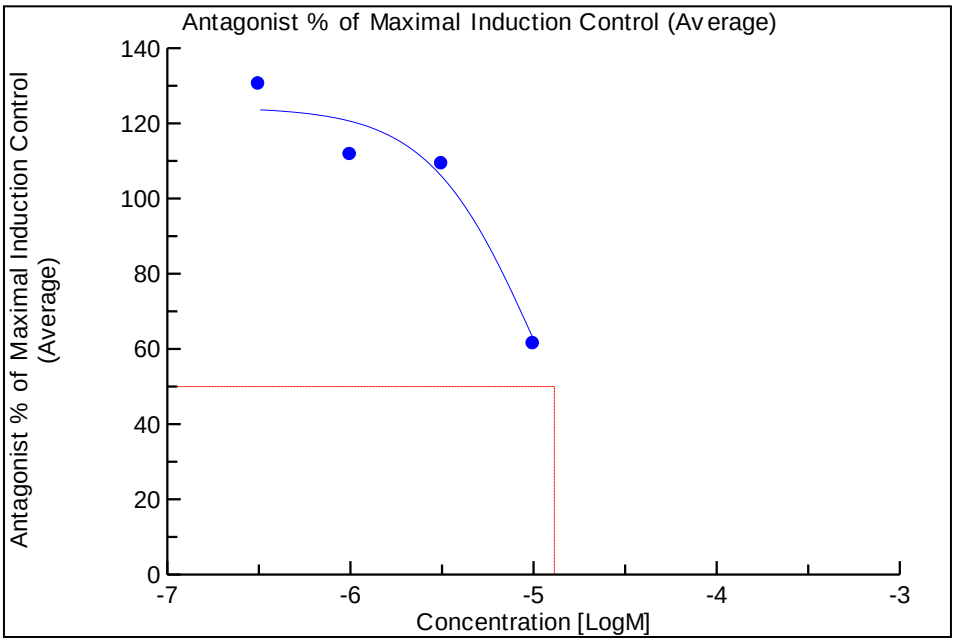
**3Nov2011**

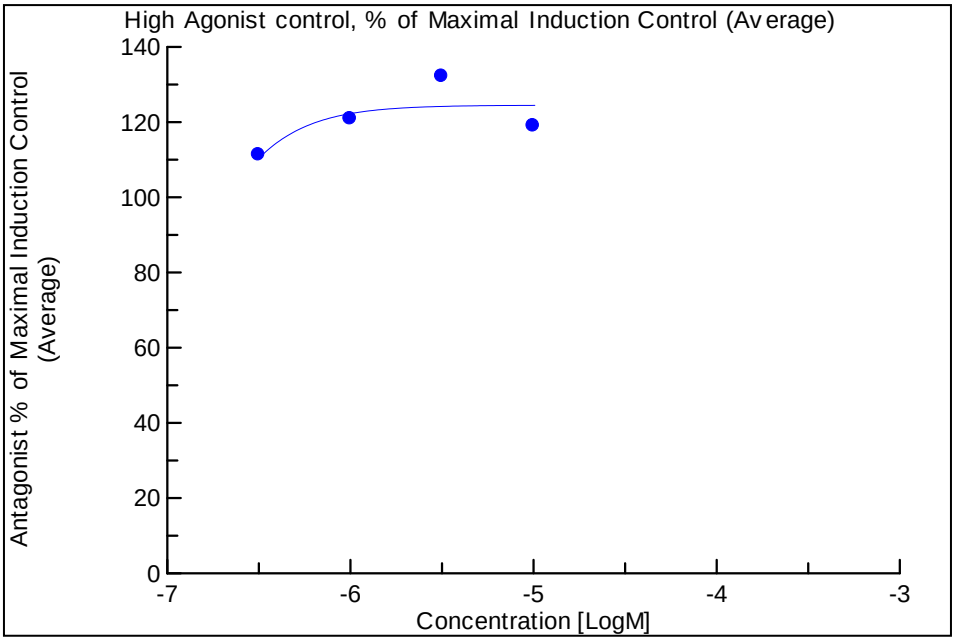



The graph represents the data (Means±Standard Deviation) from an independent runs of the assay in the absence of antagonist (n =6/concentration). The limit of cytotoxicity was -4.5 logM for run three.

## FIGURE 6 Octocrylene – Antagonist

**13Oct2011**

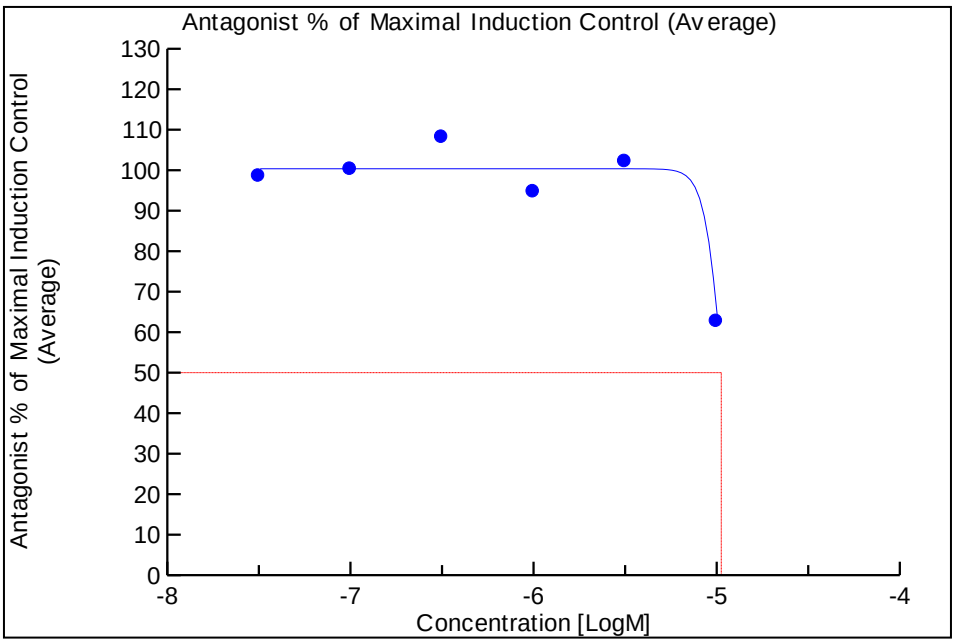


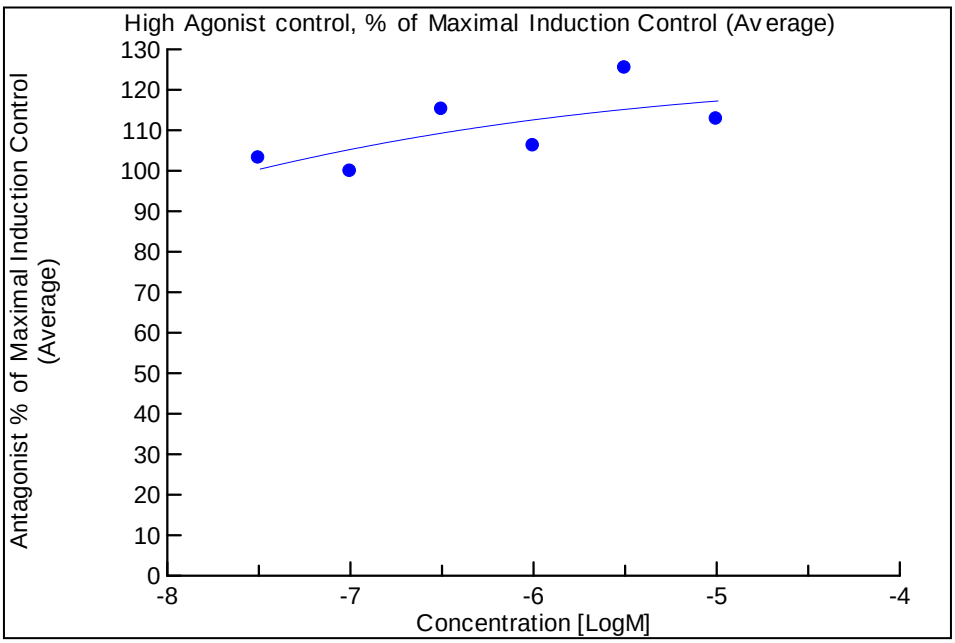




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The limit of cytotoxicity was -5.0 logM for run one.

## FIGURE 6 Octocrylene – Antagonist (Continued)

**20Oct2011**

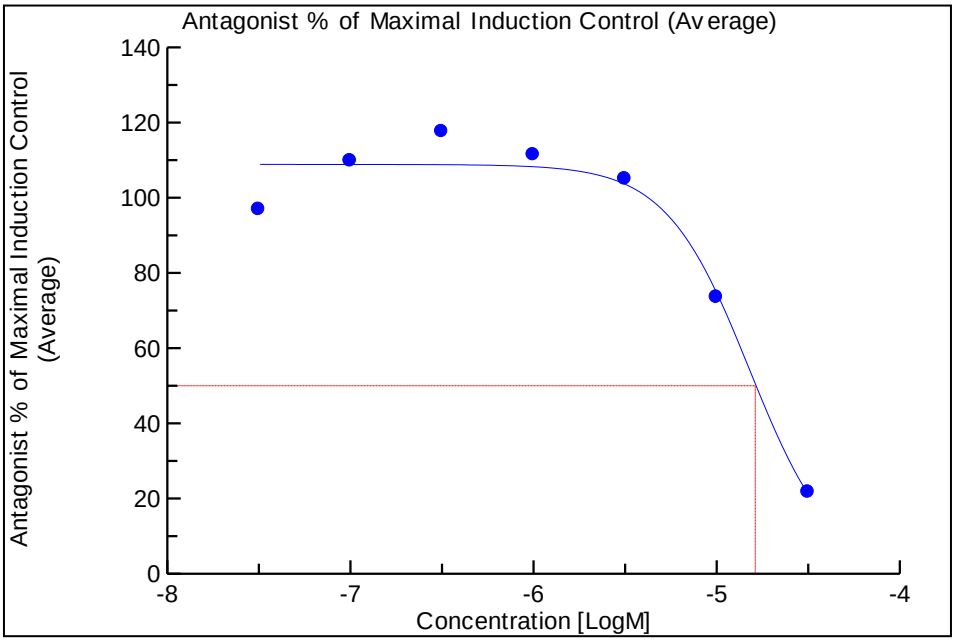


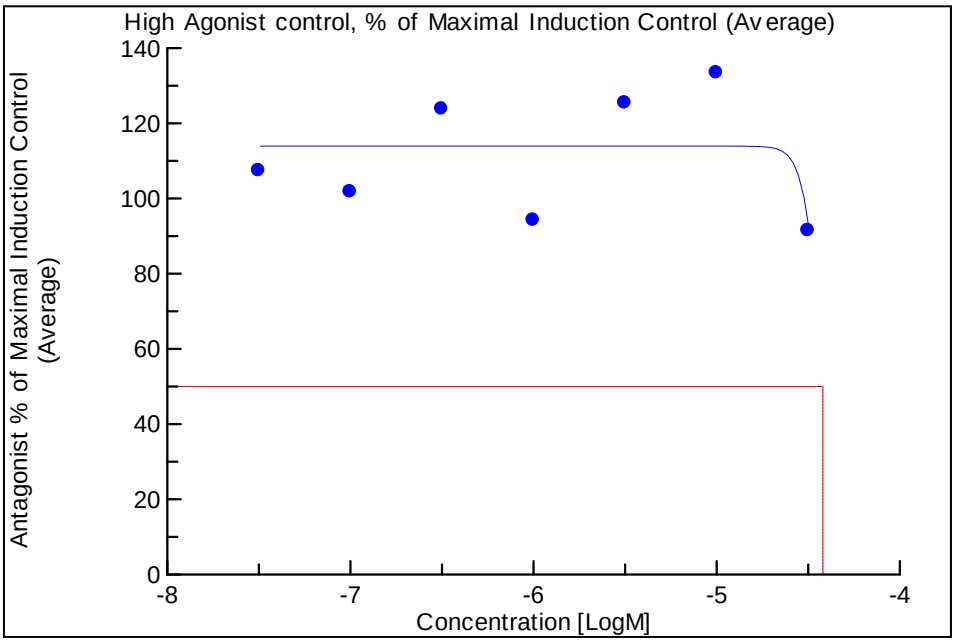




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The limit of cytotoxicity was -5.0 logM for run two.

## FIGURE 6 Octocrylene – Antagonist (Continued)

**3Nov2011**

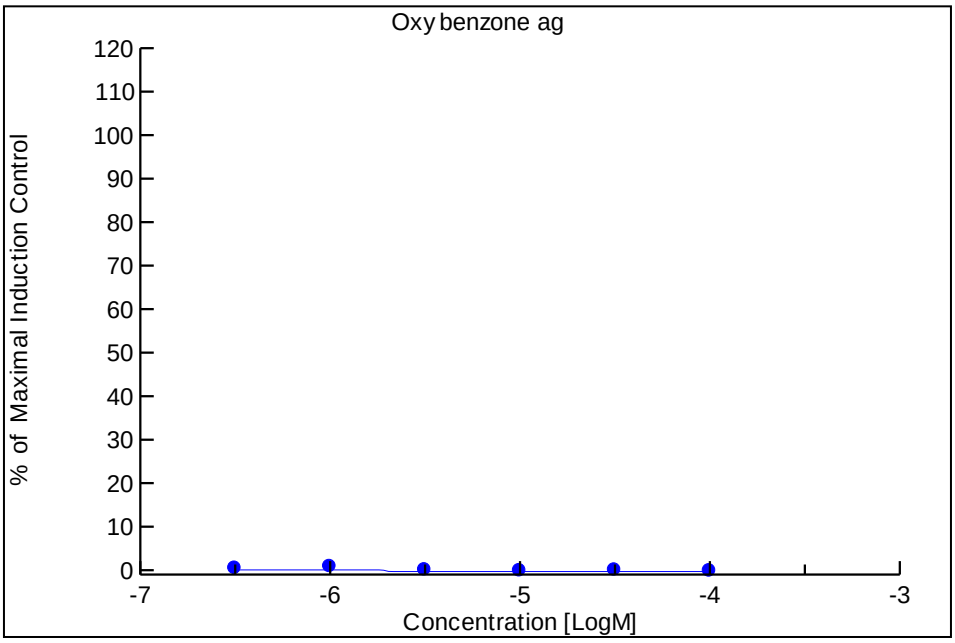


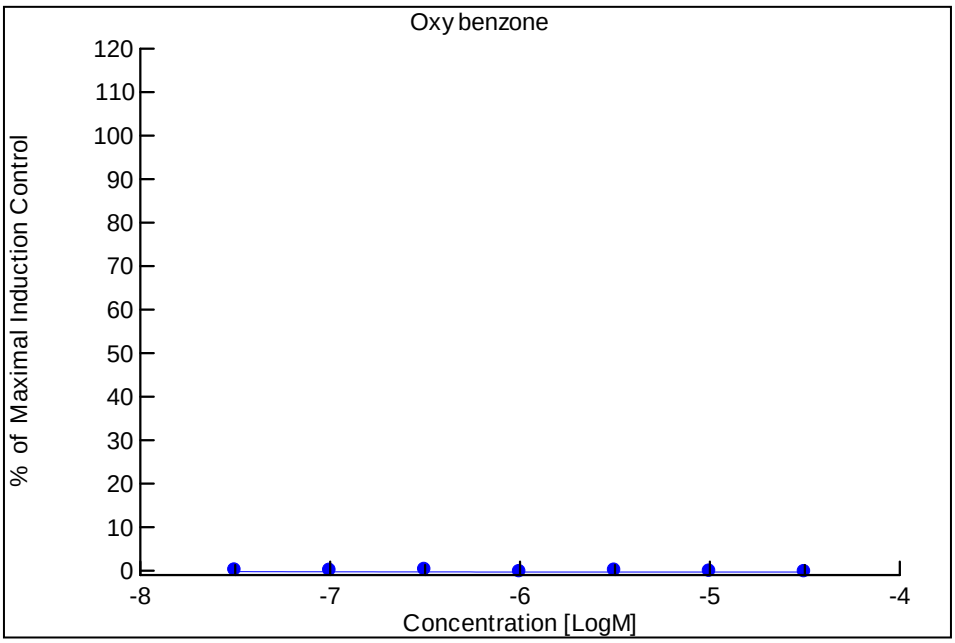

The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The limit of cytotoxicity was -4.5 logM for run three.

## FIGURE 7 Oxybenzone – Agonist

**13Oct2011**



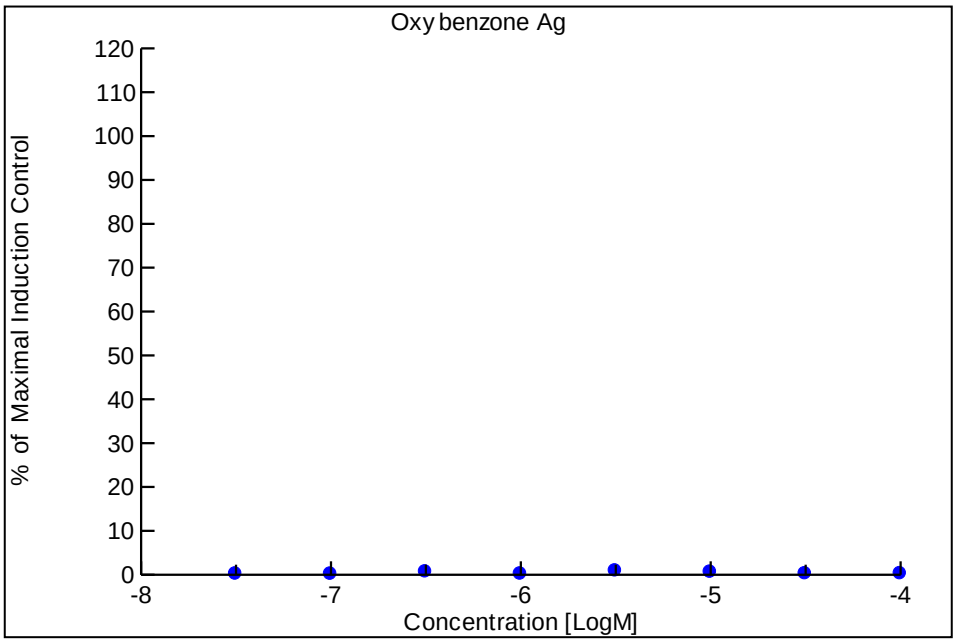

**20Oct2011**




The two separate graphs represent the data (Means±Standard Deviation) from the two different independent runs of the assay in the absence of antagonist (n =6/concentration). The cytotoxicity limit for run one was -4.0 logM. The cytotoxicity limit for run two was -4.5 logM.

## FIGURE 7 Oxybenzone – Agonist (Continued)

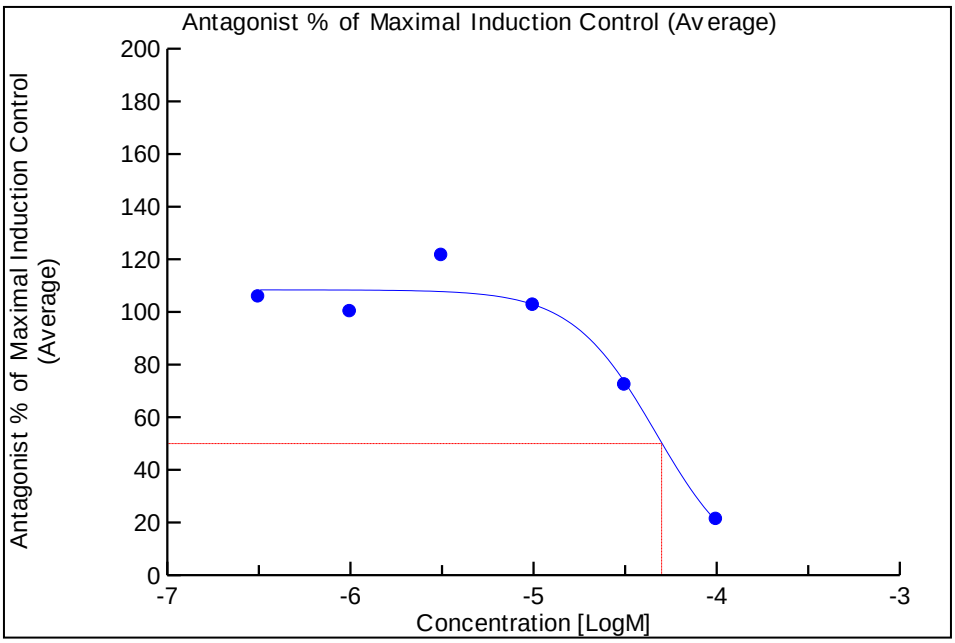
**3Nov2011**

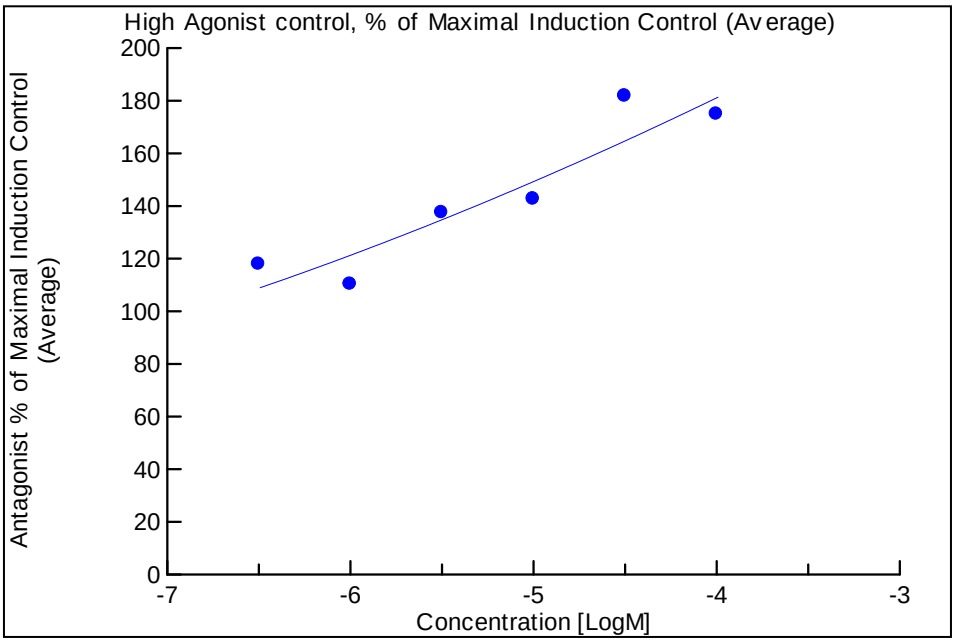



The graph represents the data (Means±Standard Deviation) from an independent runs of the assay in the absence of antagonist (n =6/concentration).

## FIGURE 8 Oxybenzone – Antagonist

**13Oct2011**

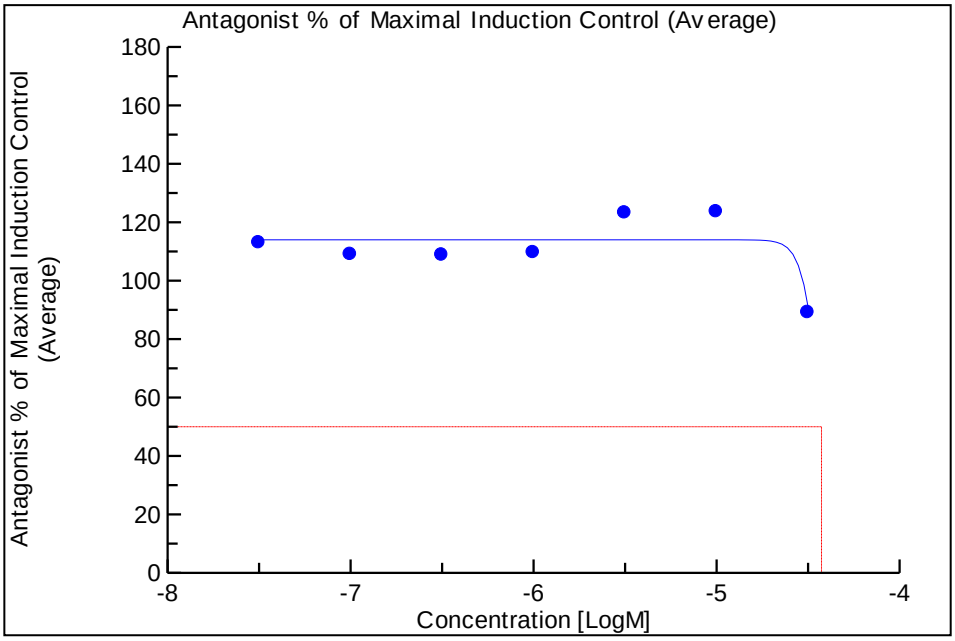


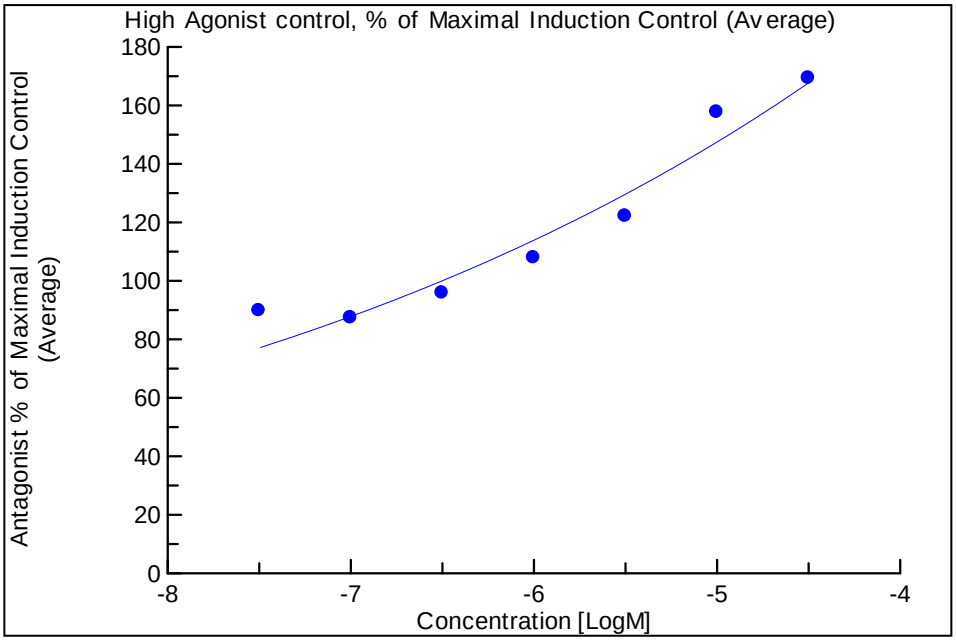




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The cytotoxicity limit for run one was -4.0 logM.

## FIGURE 8 Oxybenzone – Antagonist (Continued)

**20Oct2011**

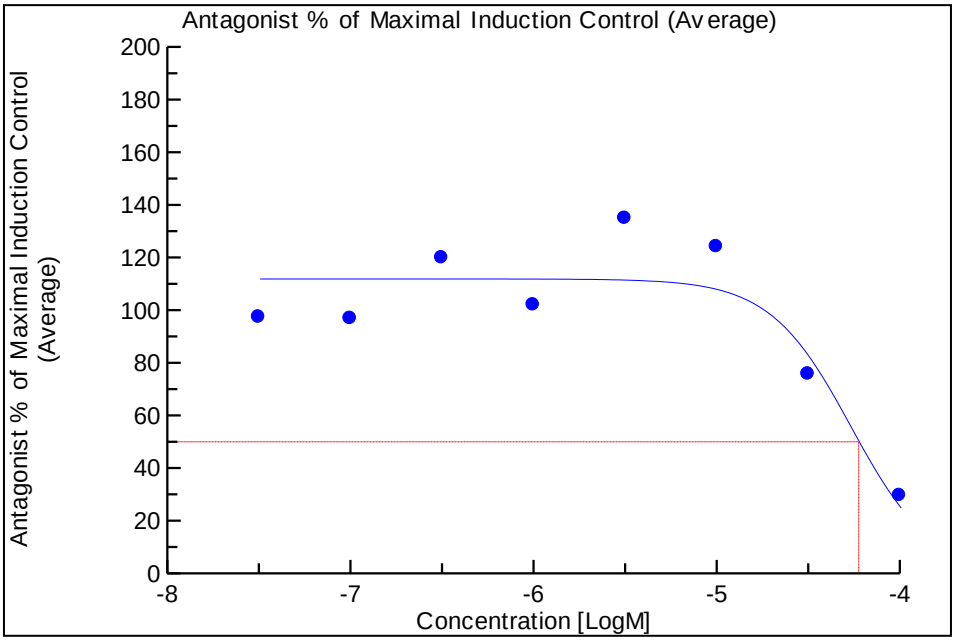


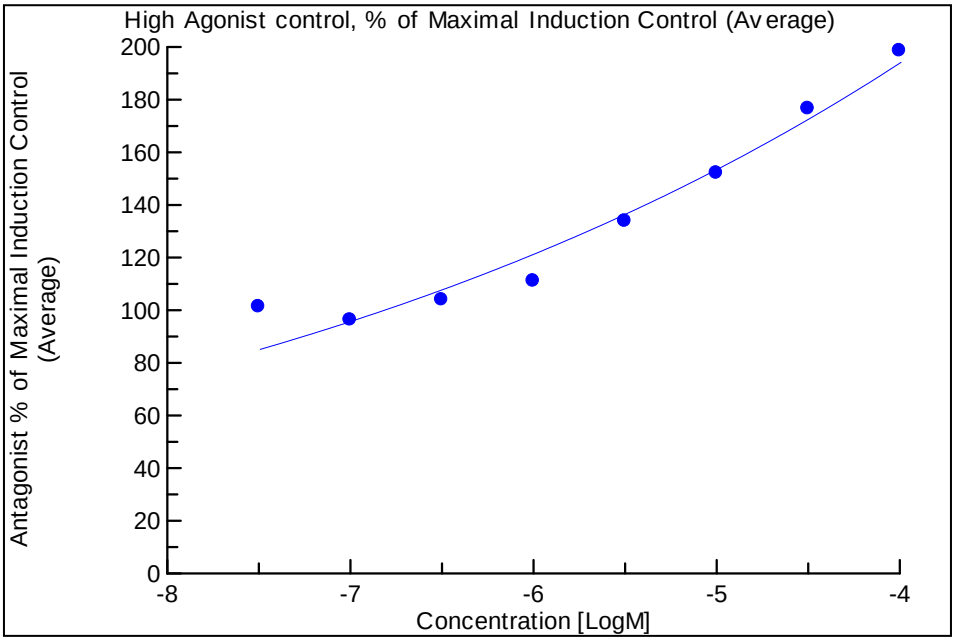




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The cytotoxicity limit for run two was -4.5 logM.

## FIGURE 8 Oxybenzone – Antagonist (Continued)

**3Nov2011**

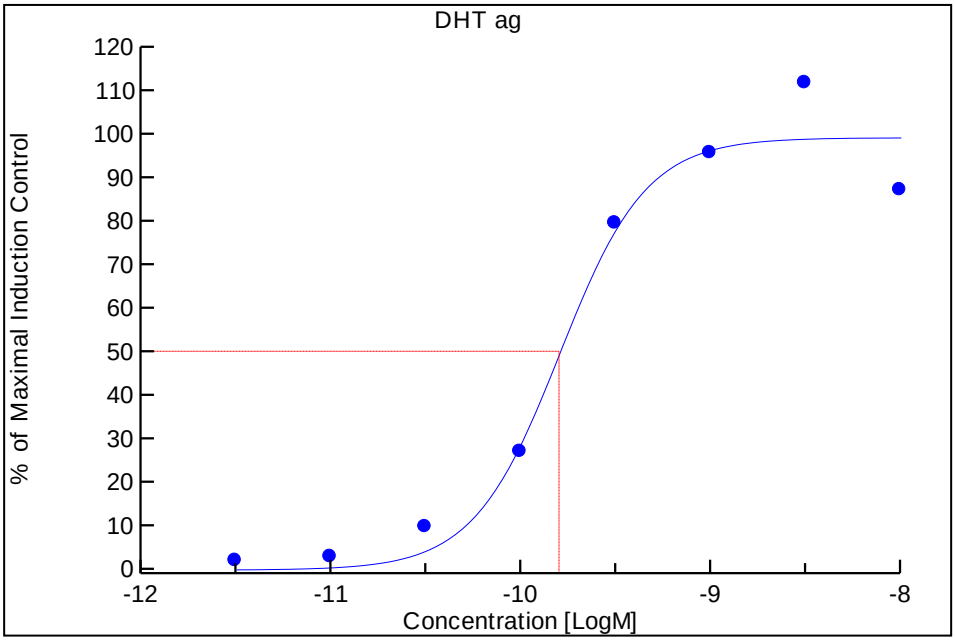


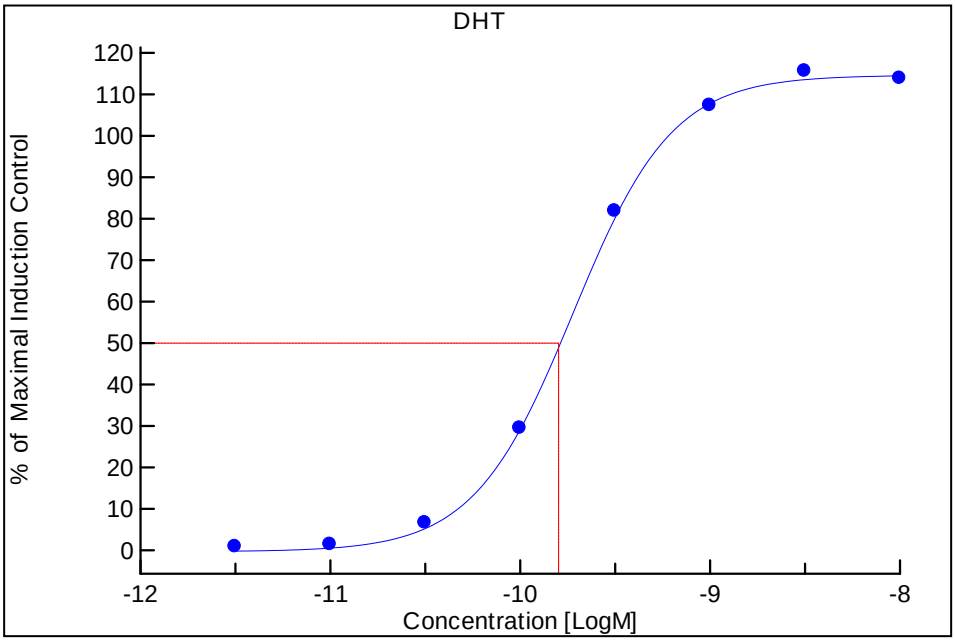

The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT.

## FIGURE 9 DHT – Agonist

**13Oct2011**



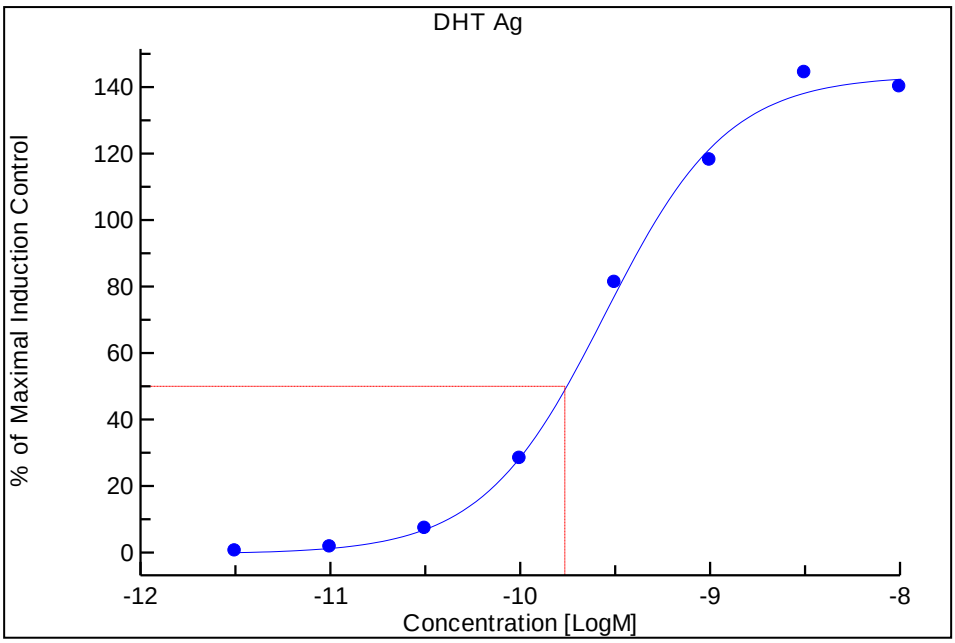

**20Oct2011**




The two separate graphs represent the data (Means±Standard Deviation) from the two different independent runs of the assay in the absence of antagonist (n =6/concentration).

## FIGURE 9 DHT – Agonist (Continued)

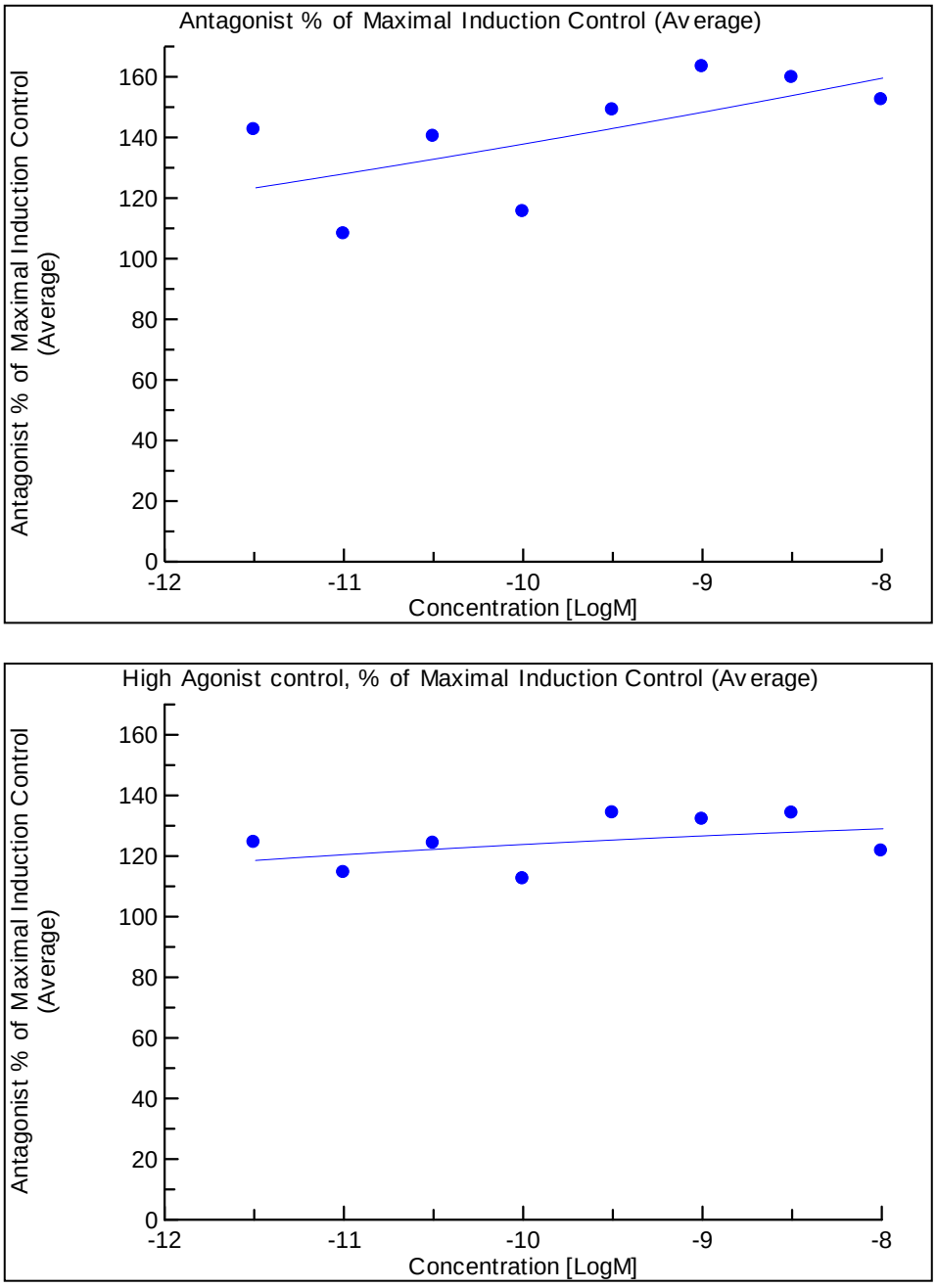
**3Nov2011**




The graph represents the data (Means±Standard Deviation) from an independent runs of the assay in the absence of antagonist (n =6/concentration).

## FIGURE 10 DHT – Antagonist

**13Oct2011**



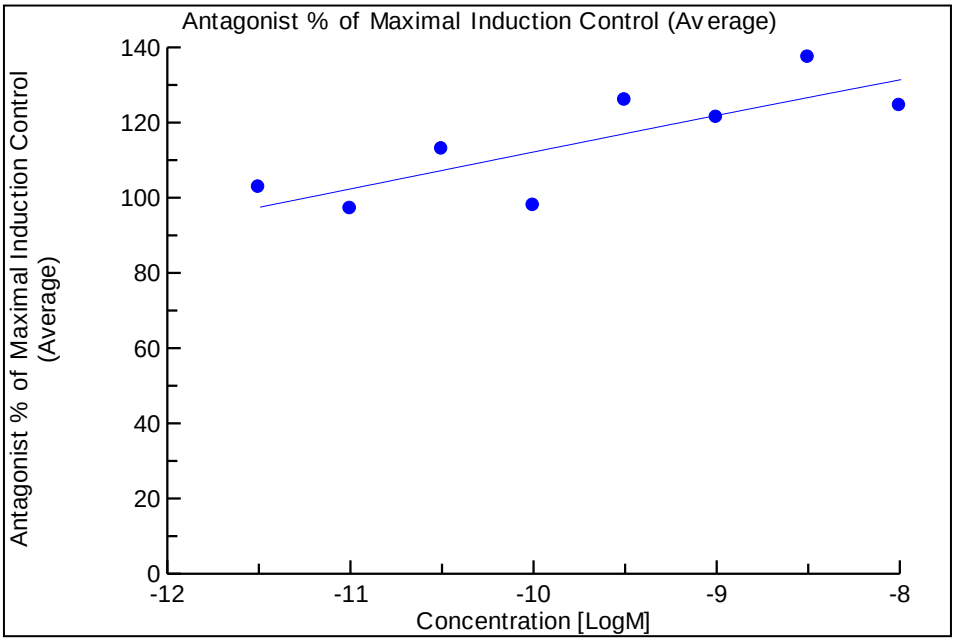


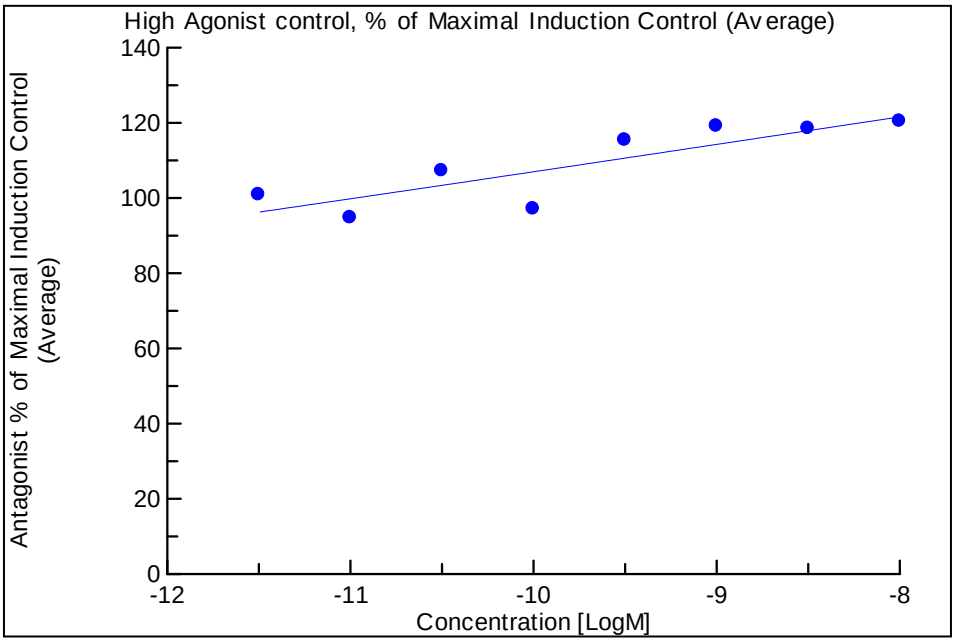


The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT.

## FIGURE 10 DHT – Antagonist (Continued)

**20Oct2011**

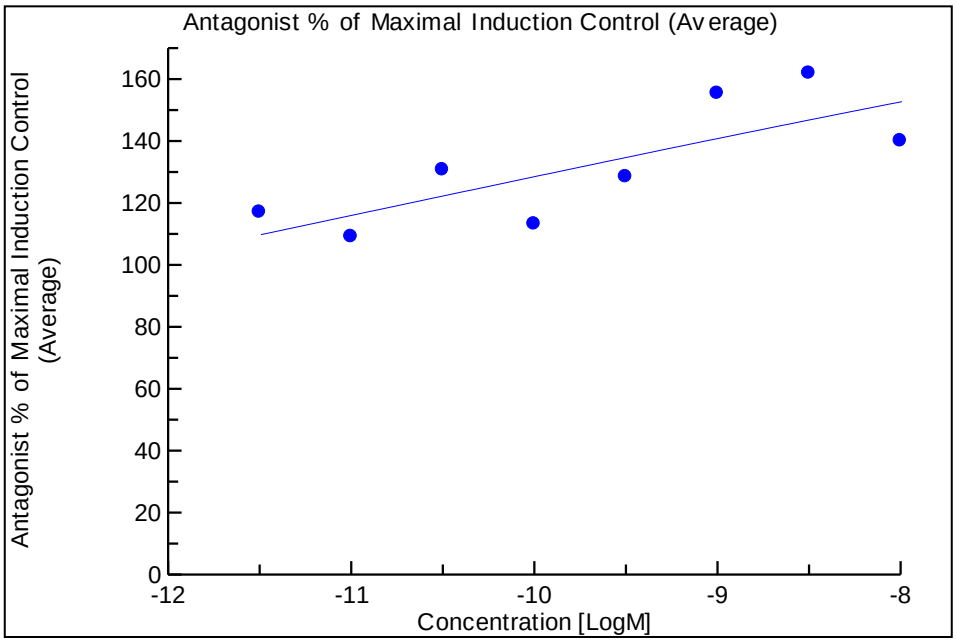


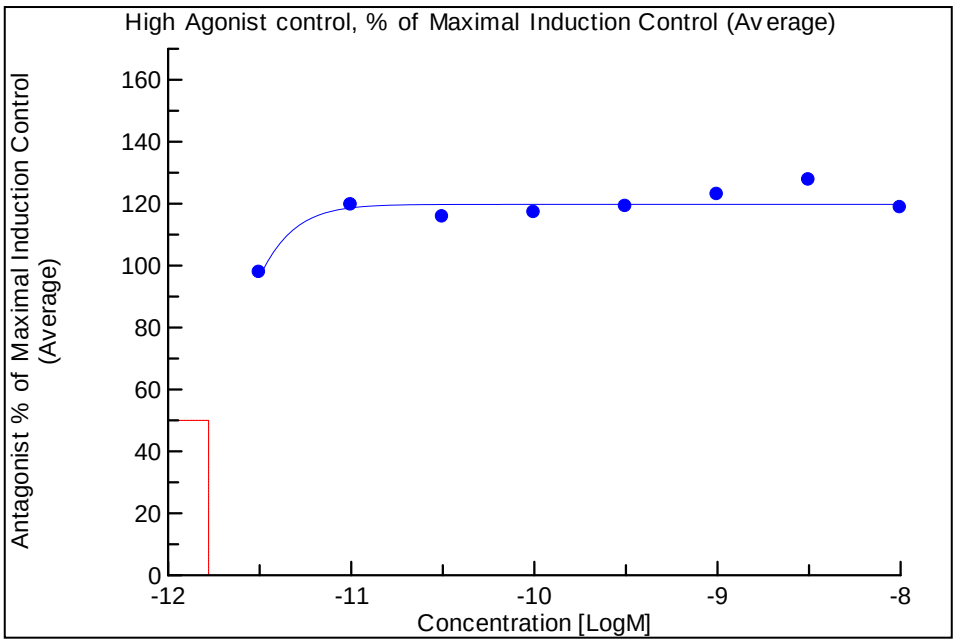




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT.

## FIGURE 10 DHT – Antagonist (Continued)

**3Nov2011**

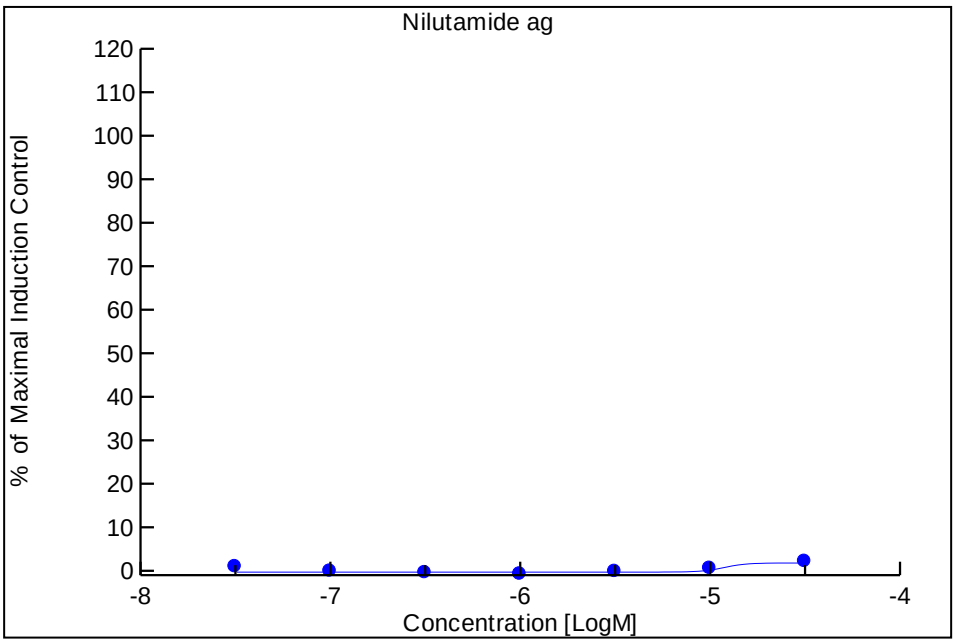


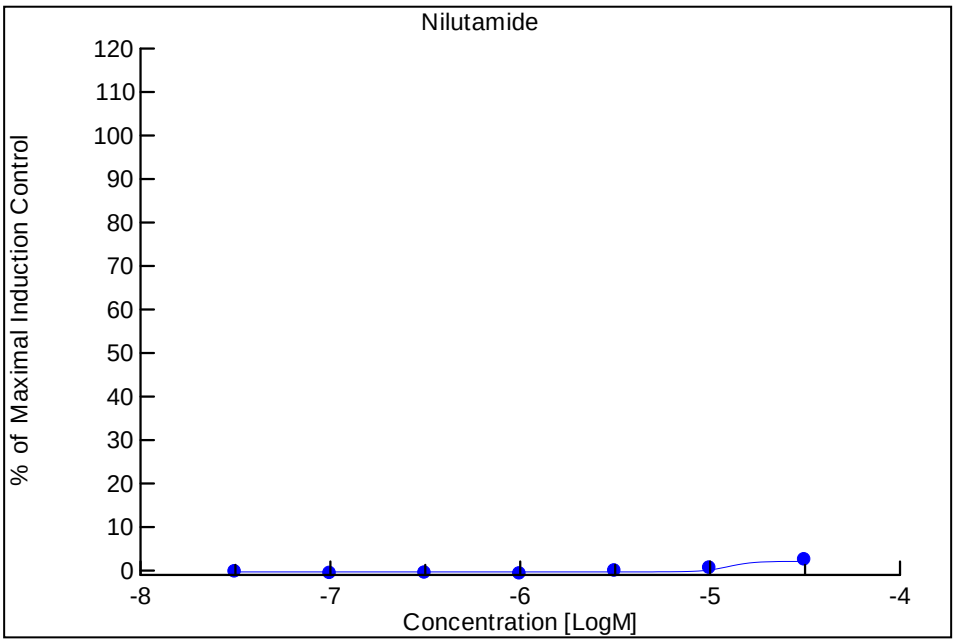

The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT.

## FIGURE 11 Nilutamide – Agonist

**13Oct2011**



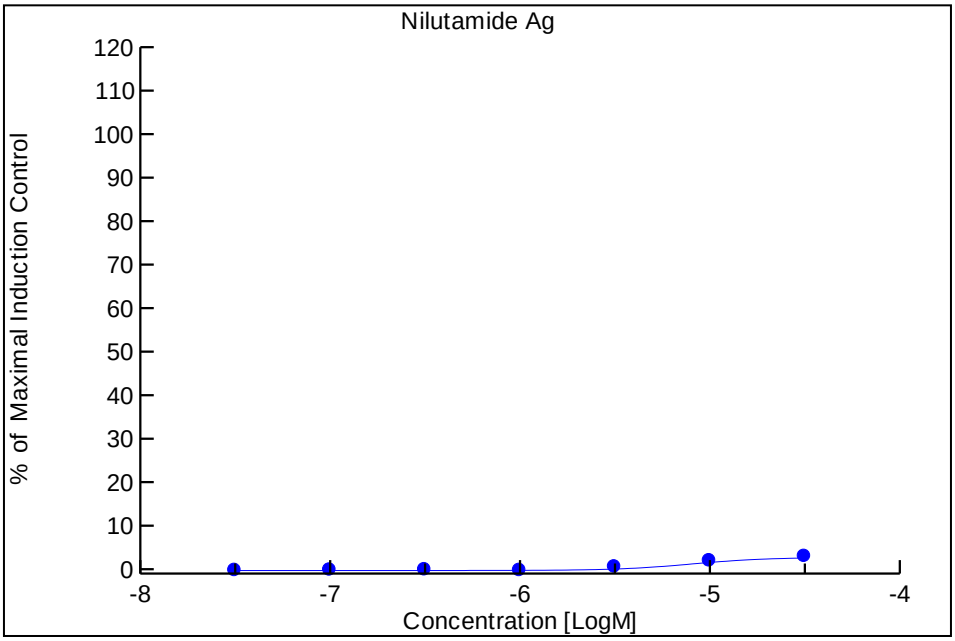

**20Oct2011**




The two separate graphs represent the data (Means±Standard Deviation) from the two different independent runs of the assay in the absence of antagonist (n =6/concentration). The cytotoxicity limit is -4.5 logM.

## FIGURE 11 Nilutamide – Agonist (Continued)

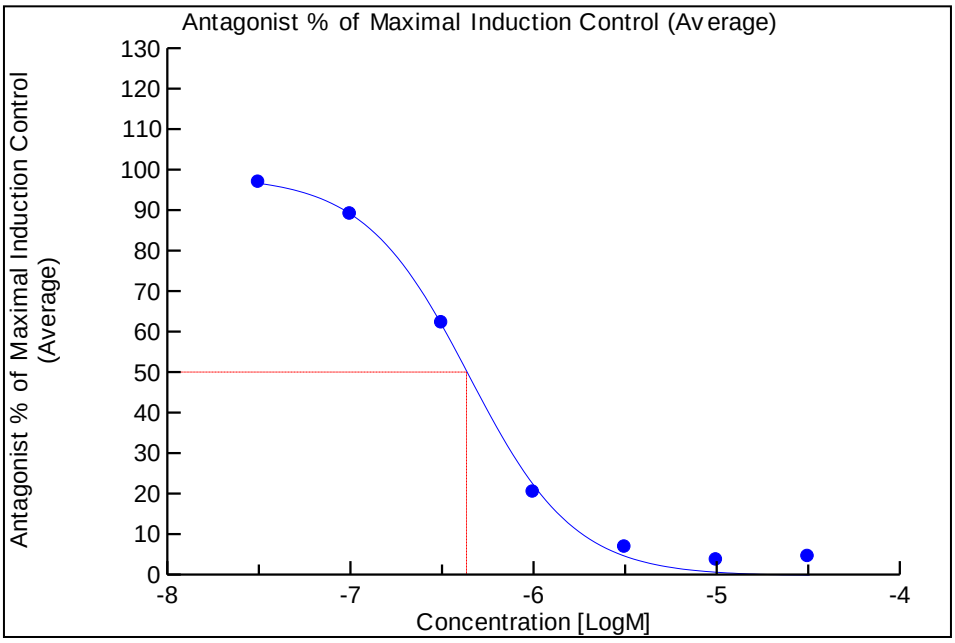
**3Nov2011**

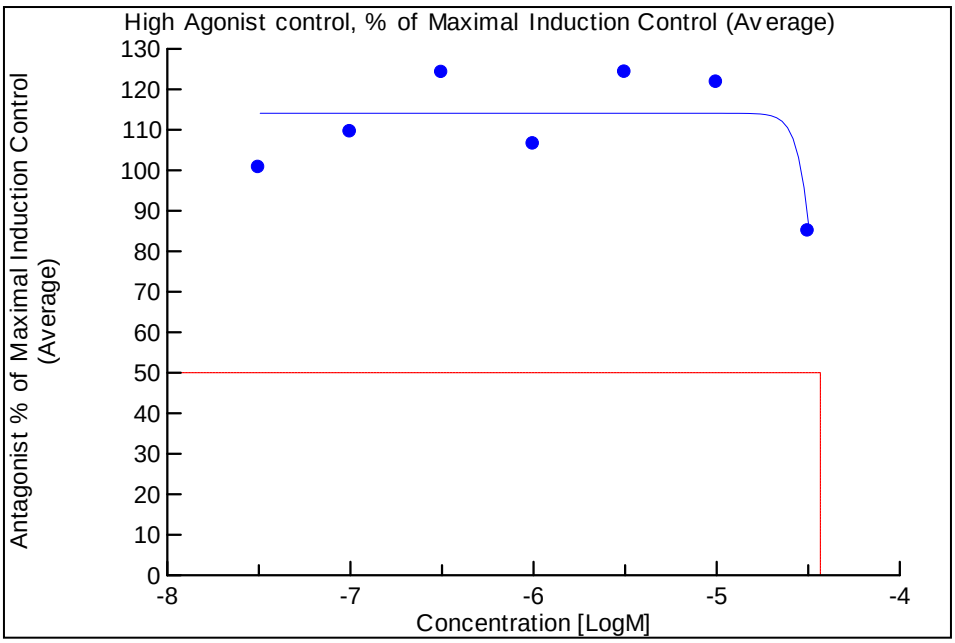



The graph represents the data (Means±Standard Deviation) from an independent runs of the assay in the absence of antagonist (n =6/concentration). The cytotoxicity limit is -4.5 logM.

## FIGURE 12 Nilutamide – Antagonist

**13Oct2011**

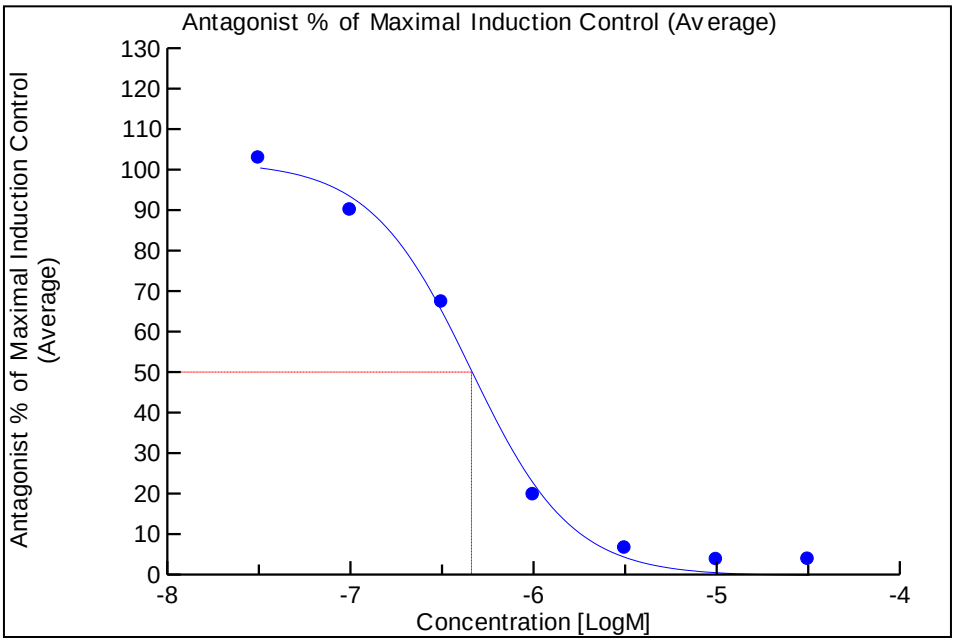


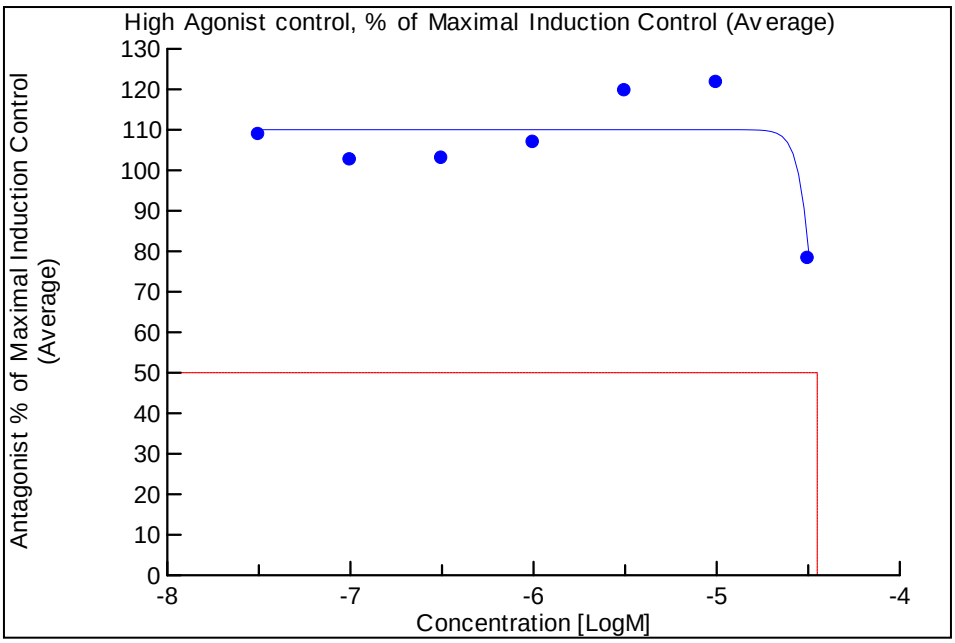




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The cytotoxicity limit is -4.5 logM.

## FIGURE 12 Nilutamide – Antagonist (Continued)

**20Oct2011**

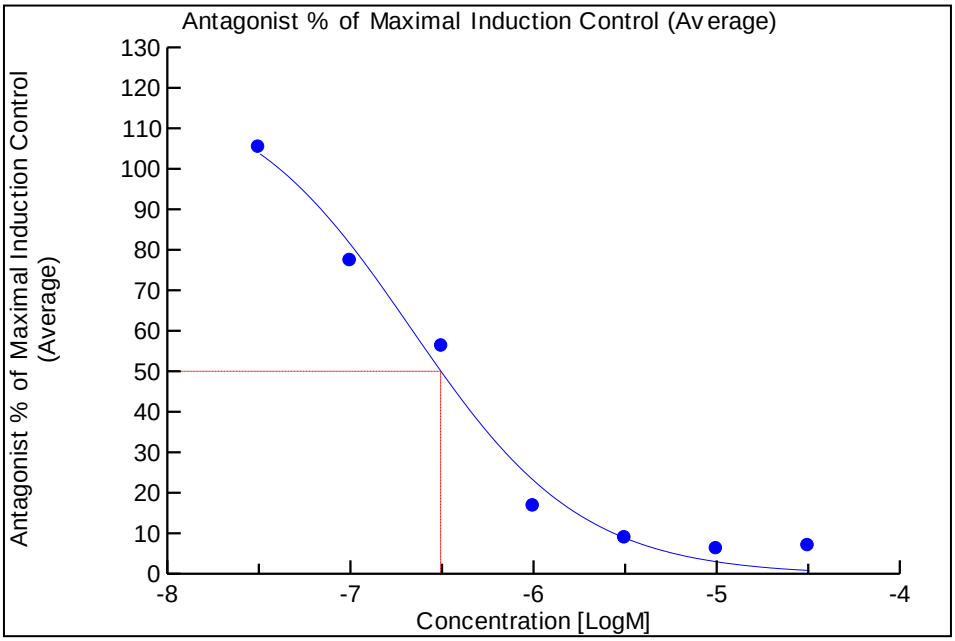


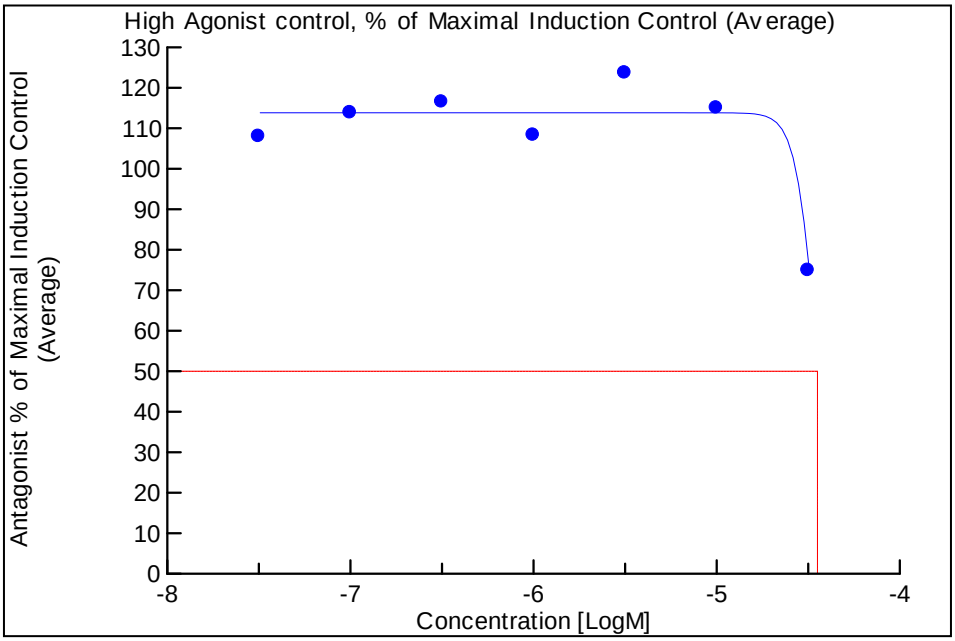




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The cytotoxicity limit is -4.5 logM.

## FIGURE 12 Nilutamide – Antagonist (Continued)

**3Nov2011**

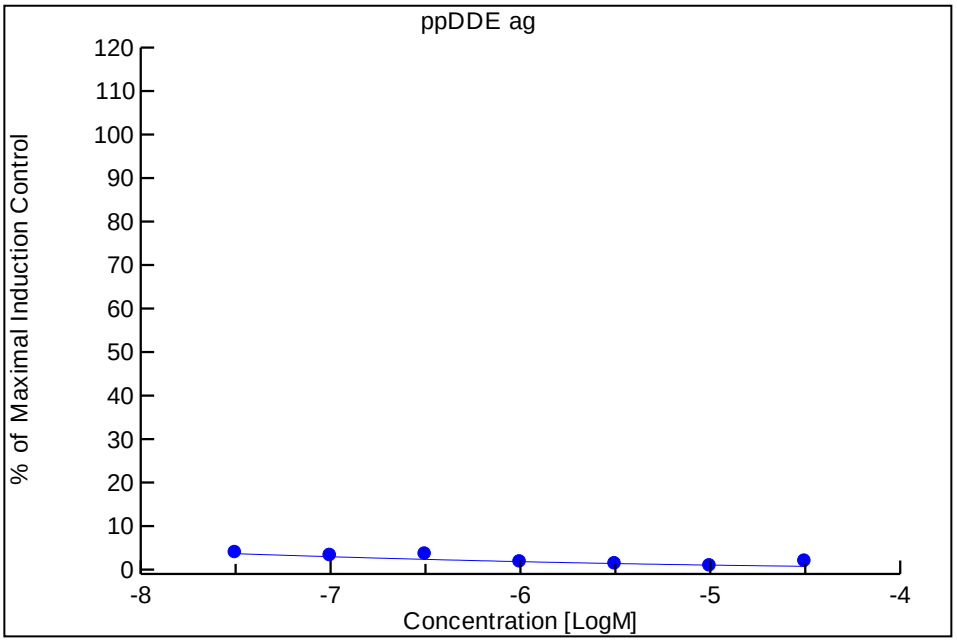


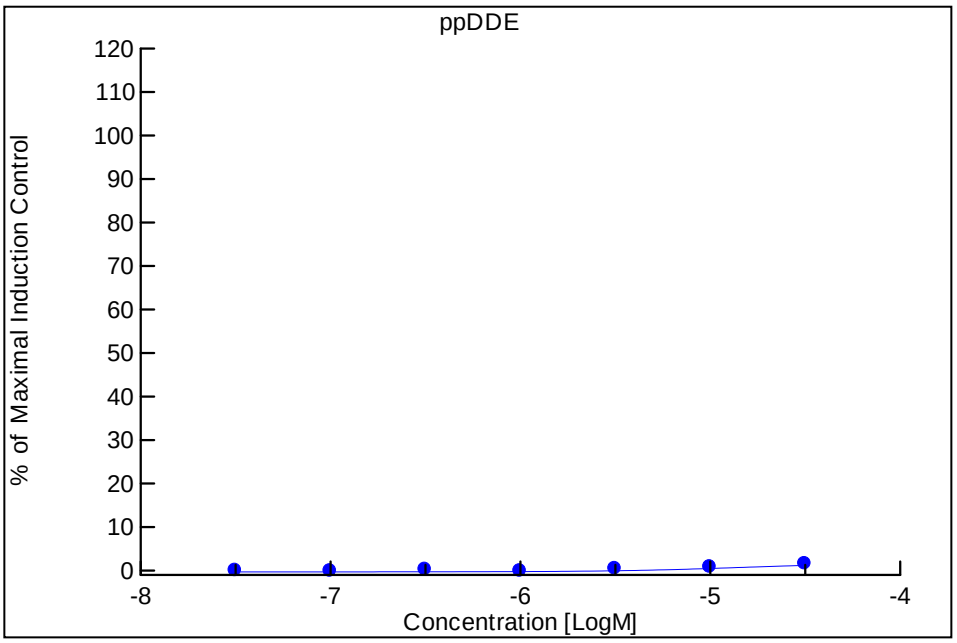

The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The cytotoxicity limit is -4.5 logM.

## FIGURE 13 ppDDE – Agonist

**13Oct2011**



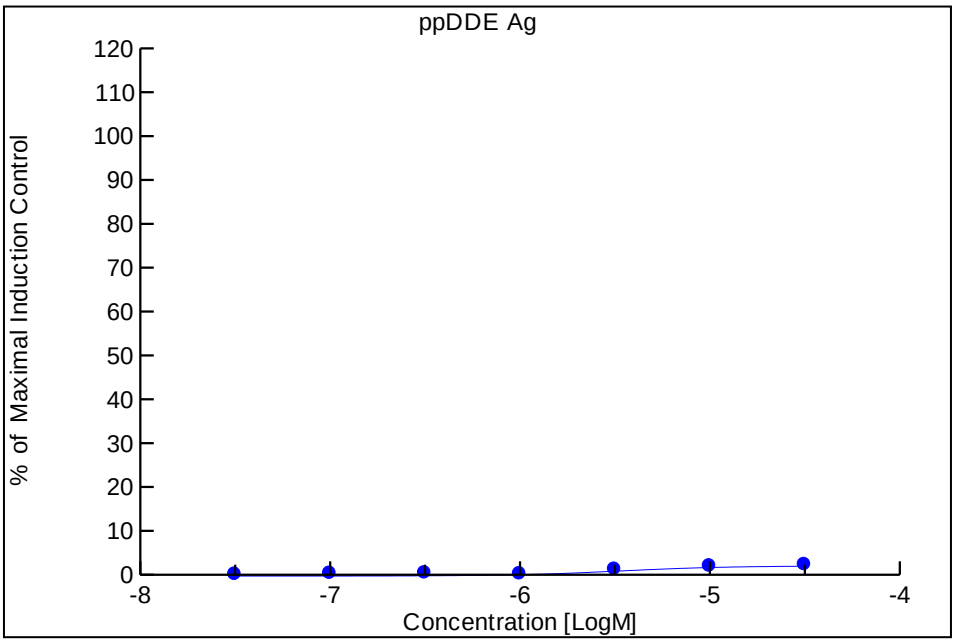

**20Oct2011**




The two separate graphs represent the data (Means±Standard Deviation) from the two different independent runs of the assay in the absence of antagonist (n =6/concentration). The cytotoxicity limit is -4.5 logM.

## FIGURE 13 ppDDE – Agonist (Continued)

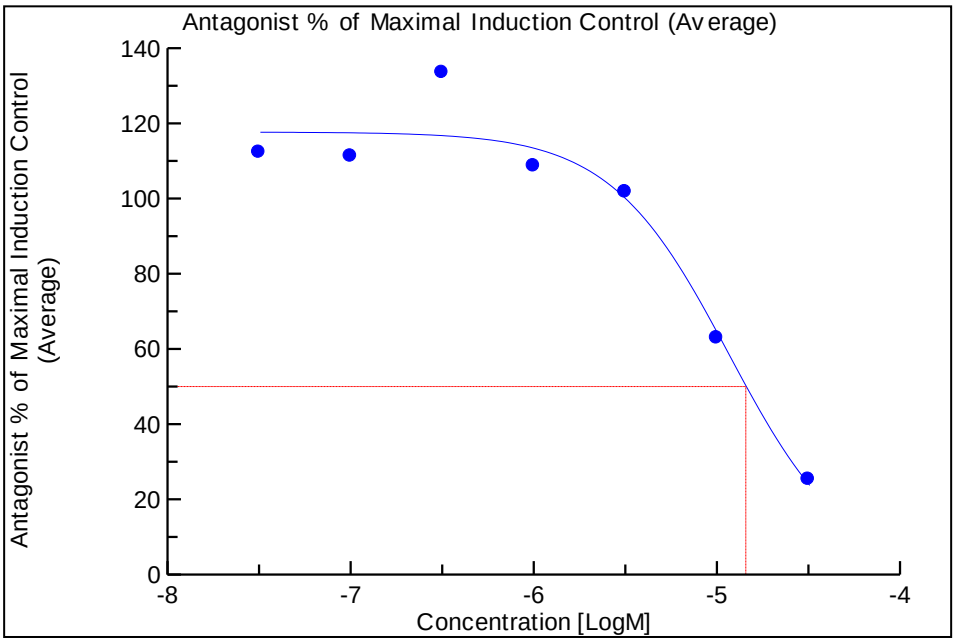
**3Nov2011**

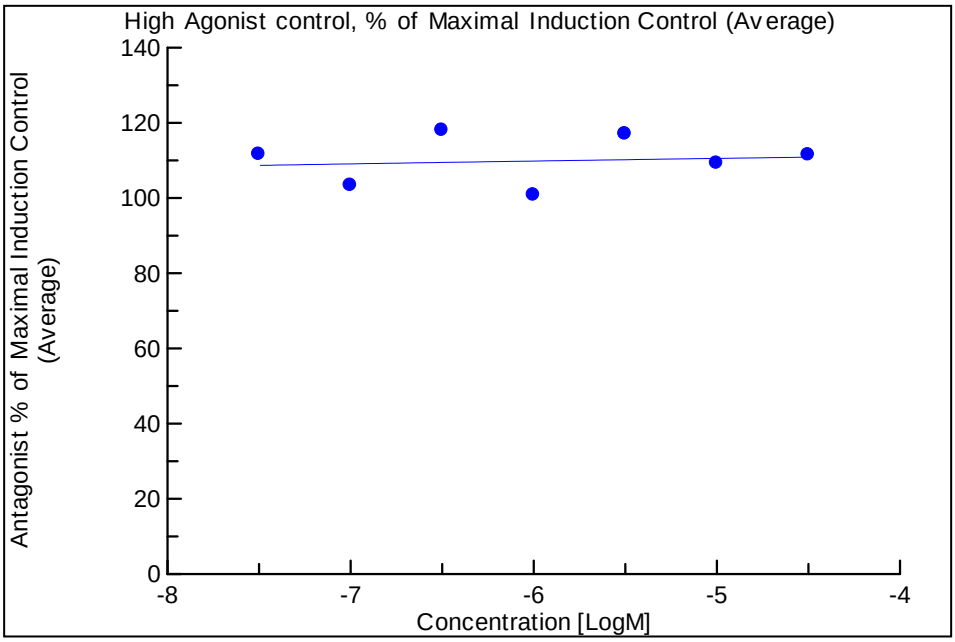



The graph represents the data (Means±Standard Deviation) from an independent runs of the assay in the absence of antagonist (n =6/concentration). The cytotoxicity limit is -4.5 logM.

## FIGURE 14 ppDDE – Antagonist

**13Oct2011**

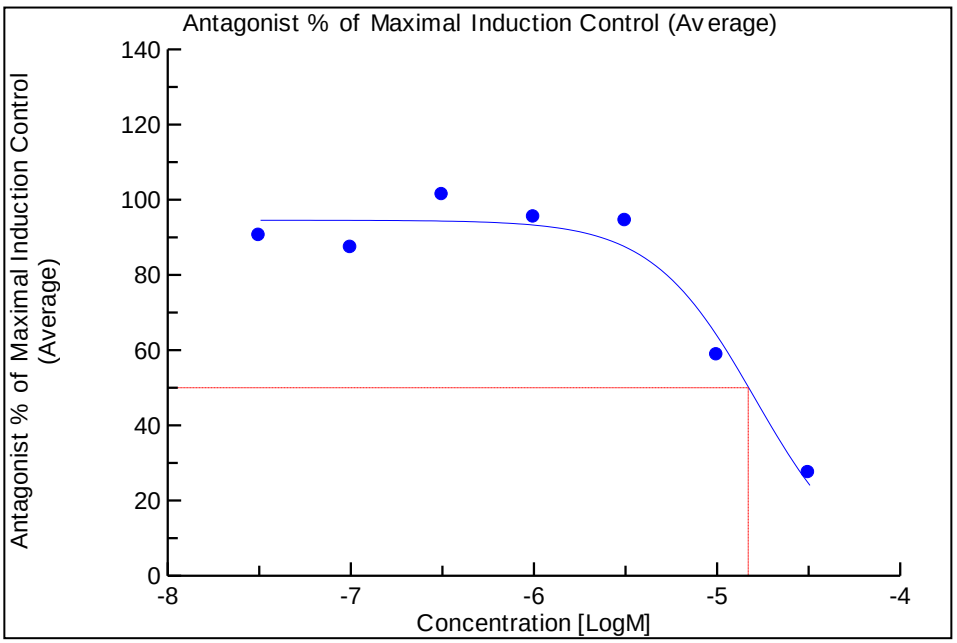


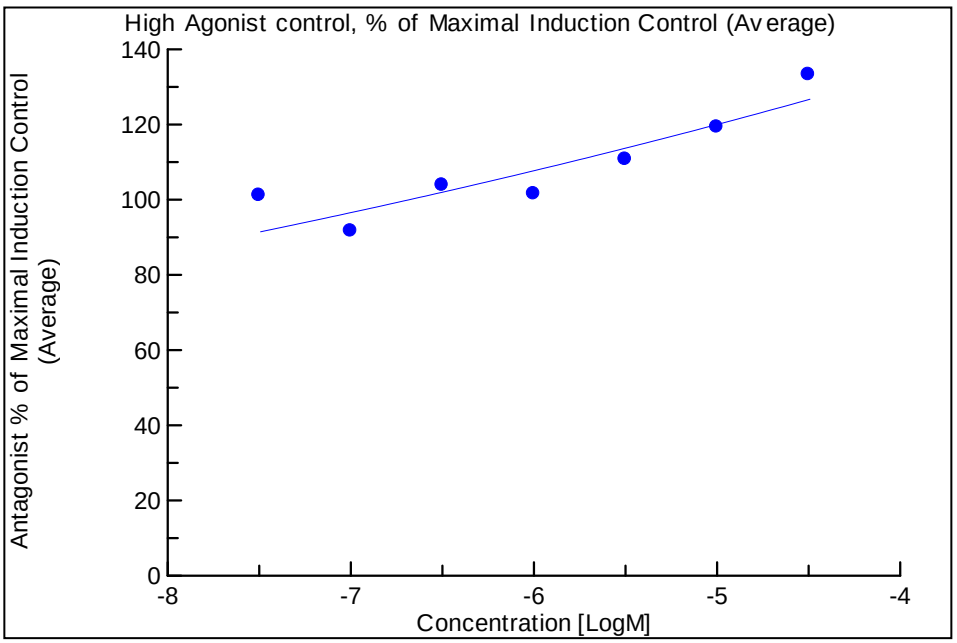




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The cytotoxicity limit is -4.5 logM.

## FIGURE 14 ppDDE – Antagonist (Continued)

**20Oct2011**

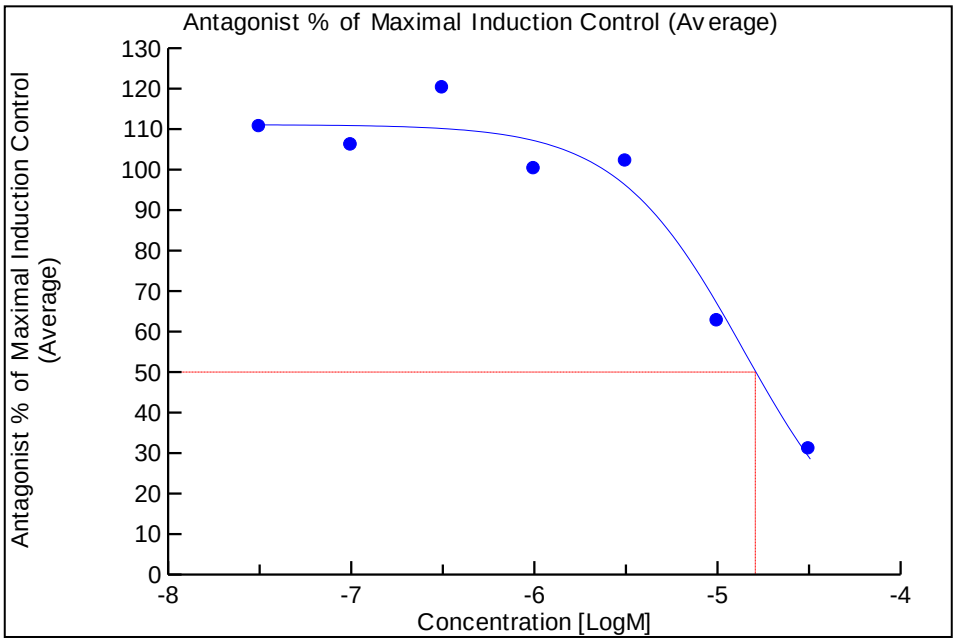


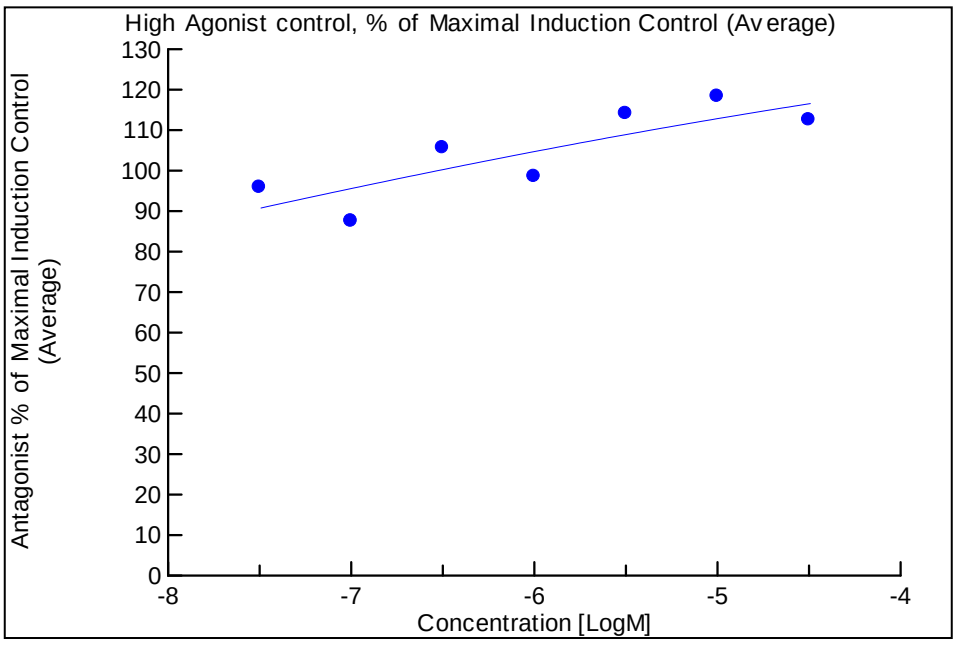




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The cytotoxicity limit is -4.5 logM.

## FIGURE 14 ppDDE – Antagonist (Continued)

**3Nov2011**




The top graph represents the cells co-dosed with 1 nM DHT. The bottom graph represents the cells co-dosed with 1000 nM DHT. The cytotoxicity limit is -4.5 logM.

# APPENDICES SECTION

# APPENDIX 1 Data Spreadsheets

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 13oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 13:17 | | Study Number: | 9070-100107 |
| Assay Conducted by: | [redacted] | Compound | Methoxycinnamate |

| Methoxycinnamate ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 200 | 1801650 | 40000 | 27450 | 32850 | 45700 | 40100 | 54400 | 50550 | 30300 | 30100 | 33250 | |
| B | 0 | 1402550 | 30000 | 22950 | 33800 | 58100 | 39750 | 54800 | 46050 | 31700 | 31000 | 30650 | |
| C | 100 | 1543250 | 31850 | 29300 | 38700 | 57700 | 48900 | 64000 | 51300 | 29500 | 44150 | 25550 | |
| D | 200 | 1589050 | 32500 | 34550 | 42300 | 65650 | 50200 | 52100 | 39250 | 25450 | 25350 | 34250 | |
| E | 0 | 1635950 | 31200 | 29250 | 40100 | 52700 | 44200 | 62550 | 41350 | 25400 | 28500 | 30650 | |
| F | 100 | 1330000 | 33750 | 30650 | 35750 | 50900 | 48650 | 57650 | 44700 | 24250 | 27050 | 23850 | |
| G | *0* | *498400* | *29300* | *46000* | *42650* | *30900* | *46800* | *28400* | *21100* | *16200* | *16300* | *10950* | with 10µM Nilutamide |
| H | *0* | *380100* | *25200* | *29100* | *36350* | *37400* | *25400* | *24650* | *17000* | *7600* | *5650* | *7350* | with 10µM Nilutamide |
| Mean | 100 | 1550408 | 31121 | | 37250 | 55125 | 45300 | 57583 | 45533 | 27767 | 31025 | 29700 | |
| Std Dev | 89 | 168776 | 4139 | | 3721 | 6911 | 4631 | 4771 | 4824 | 3106 | 6745 | 4161 | |
| SEM | 37 | 68902 | 1195 | | 1519 | 2821 | 1891 | 1948 | 1969 | 1268 | 2754 | 1699 | |
| CV% | *80.4* | *10.0* | *13.30* | | *10.0* | *12.5* | *10.2* | *8.3* | *10.6* | *11.2* | *21.7* | *14.0* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |

Rows G&H

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0 | 439250 | 32550 | | 39500 | 34150 | 36100 | 26525 | 19050 | 11900 | 10975 | 9150 | |
| Std Dev | 0 | 83651 | 9555 | | 4455 | 4596 | 15132 | 2652 | 2899 | 6081 | 7531 | 2546 | |

Mean VC 31121 Mean Nilutamide Control 32550

**Subtraction of VC from wells**

| Methoxycinnamate ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 200 | 1770529 | 8879 | -3671 | 1729 | 14579 | 8979 | 23279 | 19429 | -821 | -1021 | 2129 | |
| B | 0 | 1371429 | -1121 | -8171 | 2679 | 26979 | 8629 | 23679 | 14929 | 579 | -121 | -471 | |
| C | 100 | 1512129 | 729 | -1821 | 7579 | 26579 | 17779 | 32879 | 20179 | -1621 | 13029 | -5571 | |
| D | 200 | 1557929 | 1379 | 3429 | 11179 | 34529 | 19079 | 20979 | 8129 | -5671 | -5771 | 3129 | |
| E | 0 | 1604829 | 79 | -1871 | 8979 | 21579 | 13079 | 31429 | 10229 | -5721 | -2621 | -471 | |
| F | 100 | 1298879 | 2629 | -471 | 4629 | 19779 | 17529 | 26529 | 13579 | -6871 | -4071 | -7271 | |
| G | 0 | 465850 | -3250 | 14050 | 10100 | -1650 | 14250 | -4150 | -11450 | -16350 | -16250 | -21600 | with 10µM Nilutamide |
| H | 0 | 347550 | -7350 | -3450 | 3800 | 4850 | -7150 | -7900 | -15550 | -24950 | -26900 | -25200 | with 10µM Nilutamide |

**Corrected Data Means**

| Methoxycinnamate ag | blank | 10nM DHT | neg. control | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 100 | 1519288 | 0 | | 6129 | 24004 | 14179 | 26463 | 14413 | -3354 | -96 | -1421 |
| Std Dev | 89 | 168776 | 4139 | | 3721 | 6911 | 4631 | 4771 | 4824 | 3106 | 6745 | 4161 |
| SEM | 37 | 68902 | 1195 | | 1519 | 2821 | 1891 | 1948 | 1969 | 1268 | 2754 | 1699 |
| CV% | *80.4* | *11.1* | | | *60.7* | *28.8* | *32.7* | *18.0* | *33.5* | *-92.6* | *-7038.7* | *-292.8* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

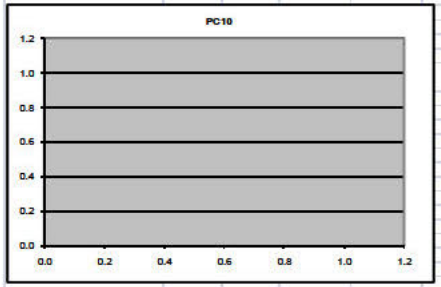
**Agonist: % of Maximal Induction Control**

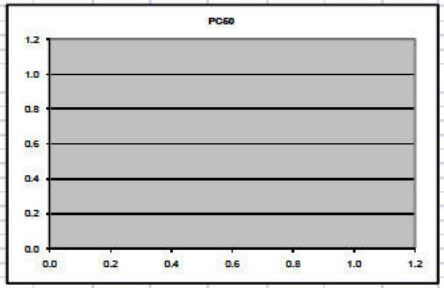
| Methoxycinnamate ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 116.5 | 0.6 | -0.2 | 0.1 | 1.0 | 0.6 | 1.5 | 1.3 | -0.1 | -0.1 | 0.1 | |
| B | 0.0 | 90.3 | -0.1 | -0.5 | 0.2 | 1.8 | 0.6 | 1.6 | 1.0 | 0.0 | 0.0 | 0.0 | |
| C | 0.0 | 99.5 | 0.0 | -0.1 | 0.5 | 1.7 | 1.2 | 2.2 | 1.3 | -0.1 | 0.9 | -0.4 | |
| D | 0.0 | 102.5 | 0.1 | 0.2 | 0.7 | 2.3 | 1.3 | 1.4 | 0.5 | -0.4 | -0.4 | 0.2 | |
| E | 0.0 | 105.6 | 0.0 | -0.1 | 0.6 | 1.4 | 0.9 | 2.1 | 0.7 | -0.4 | -0.2 | 0.0 | |
| F | 0.0 | 85.5 | 0.2 | 0.0 | 0.3 | 1.3 | 1.2 | 1.7 | 0.9 | -0.5 | -0.3 | -0.5 | |
| G | 0.0 | 30.7 | -0.2 | 0.9 | 0.7 | -0.1 | 0.9 | -0.3 | -0.8 | -1.1 | -1.1 | -1.4 | with 10µM Nilutamide |
| H | 0.0 | 22.9 | -0.5 | -0.2 | 0.3 | 0.3 | -0.5 | -0.5 | -1.0 | -1.6 | -1.8 | -1.7 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Methoxycinnamate ag | blank | 10nM DHT | neg. control | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.4 | 1.6 | 0.9 | 1.7 | 0.9 | -0.2 | 0.0 | -0.1 |
| Std Dev | 0.0 | 11.1 | 0.3 | | 0.2 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 0.4 | 0.3 |
| SEM | 0.0 | 4.5 | 0.1 | | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 |

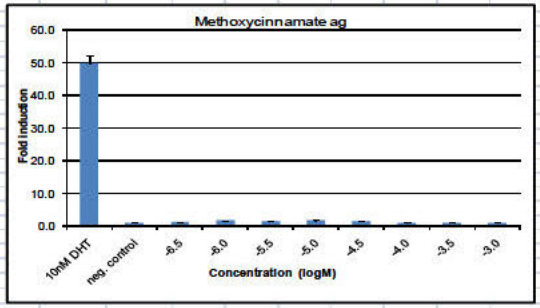
PC10 PC50

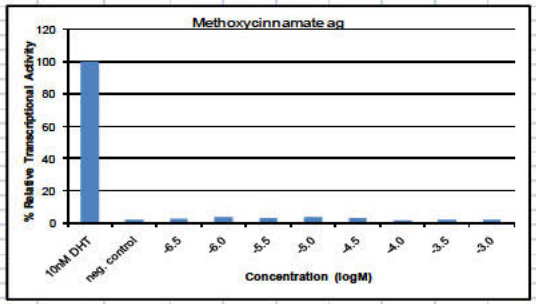



**FOLD INDUCTION**

| 10nM DH | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 57.9 | 1.3 | 0.9 | 1.1 | 1.5 | 1.3 | 1.7 | 1.6 | 1.0 | 1.0 | 1.1 | |
| 45.1 | 1.0 | 0.7 | 1.1 | 1.9 | 1.3 | 1.8 | 1.5 | 1.0 | 1.0 | 1.0 | |
| 49.6 | 1.0 | 0.9 | 1.2 | 1.9 | 1.6 | 2.1 | 1.6 | 0.9 | 1.4 | 0.8 | |
| 51.1 | 1.0 | 1.1 | 1.4 | 2.1 | 1.6 | 1.7 | 1.3 | 0.8 | 0.8 | 1.1 | |
| 52.6 | 1.0 | 0.9 | 1.3 | 1.7 | 1.4 | 2.0 | 1.3 | 0.8 | 0.9 | 1.0 | |
| 42.7 | 1.1 | 1.0 | 1.1 | 1.6 | 1.6 | 1.9 | 1.4 | 0.8 | 0.9 | 0.8 | |
| 49.8 | 1.0 | | 1.2 | 1.8 | 1.5 | 1.9 | 1.5 | 0.9 | 1.0 | 1.0 | Mean |
| 5.4 | 0.1 | | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | Std Dev |
| 2.2 | 0.0 | | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | SEM |
| *10.9* | *13.3* | | *10.0* | *12.5* | *10.2* | *8.3* | *10.6* | *11.2* | *21.7* | *14.0* | CV% |
| 100 | 2.0 | | 2.4 | 3.6 | 2.9 | 3.7 | 2.9 | 1.8 | 2.0 | 1.9 | Relative Tran |

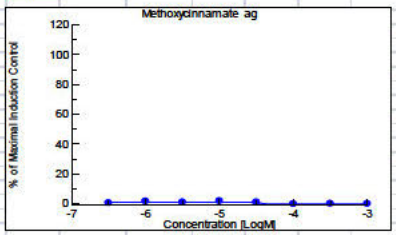



**Viability (% Control)**

| Methoxycinnamate | 10nM DHT | neg. cont | neg. cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 103 | 100 | 103 | 105 | 110 | 107 | 102 | 100 | 89 | 90 | 91 |
| StdDev | 5 | 5 | 5 | 6 | 9 | 6 | 9 | 2 | 6 | 5 | 4 |
| SEM | 2 | 2 | 2 | 2 | 4 | 3 | 3 | 1 | 2 | 2 | 2 |
| %CV | 4.8 | 4.9 | 5.2 | 5.7 | 7.8 | 5.9 | 8.3 | 2.2 | 6.9 | 5.6 | 4.0 |

Fit Chart: #Intersect #Ok




0 Bottom
1.2 Top
-4.5 EC50
-14.0 Hill slope

# Data Spreadsheets

Experiment date: 13Oct2011
TopCount Model B9912V. Serial# 408672
11/11/11 13:23
Assay Conducted by:

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Methoxycinnamate

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Methoxycinnamate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 961000 | 19300 | 765850 | 875150 | 890150 | 1123650 | 846950 | 856750 | 531150 | 523350 | 641250 | with 1nM DHT |
| B | 50 | 1022100 | 27000 | 944150 | 1110600 | 1007450 | 1145600 | 1054500 | 969700 | 722100 | 691000 | 679450 | with 1nM DHT |
| C | 0 | 853750 | 17750 | 838550 | 964600 | 837300 | 1088750 | 814850 | 659850 | 497750 | 521850 | 678850 | with 1nM DHT |
| D | 50 | 935850 | 18900 | 888250 | 941200 | 860450 | 1045750 | 815150 | 900350 | 492750 | 669000 | 688050 | with 1nM DHT |
| E | 0 | 1077000 | 935500 | 872650 | 1082750 | 992950 | 1025900 | 935100 | 891700 | 646600 | 660850 | 845250 | with 1000nM DHT |
| F | 0 | 949100 | 894000 | 856200 | 1030900 | 1091700 | 1066450 | 932300 | 877750 | 624350 | 631650 | 733250 | with 1000nM DHT |
| G | 0 | 1077000 | 1066450 | 1078350 | 1104050 | 1237500 | 1328200 | 956350 | 1066050 | 746550 | 746900 | 864750 | with 1000nM DHT |
| H | 50 | 1120000 | 1137750 | 1103100 | 1164700 | 1071600 | 1234750 | 1175000 | 962350 | 743600 | 866050 | 735700 | with 1000nM DHT |
| Mean | 25 | 943175 | 20738 | 859200 | 972888 | 898838 | 1100938 | 882863 | 846663 | 560938 | 601300 | 671900 | |
| Std Dev | 29 | 69755 | 4226 | 75721 | 99315 | 75570 | 43607 | 115412 | 132943 | 108785 | 91320 | 20861 | |
| SEM | 14 | 34878 | 2113 | 37861 | 49657 | 37785 | 21804 | 57706 | 66471 | 54393 | 45660 | 10431 | |
| CV% | 115.5 | 7.4 | 20.4 | 8.8 | 10.2 | 8.4 | 4.0 | 13.1 | 15.7 | 19.4 | 15.2 | 3.1 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.0 | 1.0 | 1.2 | 0.9 | 0.9 | 0.6 | 0.6 | 0.7 | |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 1056450 | 1013425 | 1002625 | 1095600 | 1073438 | 1164325 | 999738 | 953963 | 690850 | 676363 | 799738 | |
| Std Dev | 25 | 74219 | 117081 | 112778 | 55370 | 141220 | 141619 | 117343 | 95762 | 63576 | 49402 | 64966 | |
| SEM | 13 | 37110 | 58541 | 56389 | 27685 | 70610 | 70810 | 58671 | 47881 | 31788 | 24701 | 32478 | |
| CV% | 200.0 | 7.0 | 11.6 | 11.2 | 5.1 | 13.2 | 12.2 | 11.7 | 10.0 | 9.2 | 7.3 | 8.1 | |

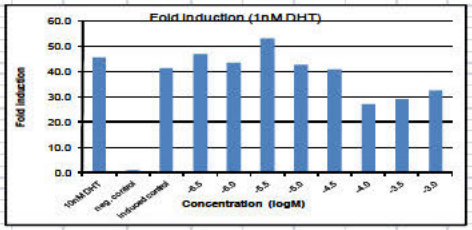
Mean VC: 20738 Mean DHT 1000nM Control: 1013425

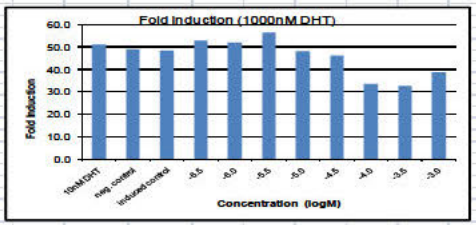
Fold Induction (1nM DHT)

| | 10nM DH | neg. control | Induced cor | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 46.3 | 0.9 | 36.9 | 42.2 | 42.9 | 54.2 | 40.8 | 41.3 | 25.6 | 25.2 | 30.9 |
| | 49.3 | 1.3 | 45.5 | 53.6 | 48.6 | 56.2 | 50.8 | 46.8 | 34.8 | 33.3 | 32.8 |
| | 41.2 | 0.9 | 40.4 | 46.5 | 40.4 | 52.5 | 39.3 | 31.8 | 24.0 | 25.2 | 32.7 |
| | 45.1 | 0.9 | 42.8 | 45.4 | 41.5 | 50.4 | 39.3 | 43.4 | 23.8 | 32.3 | 33.2 |
| | 51.9 | 45.1 | 46.9 | 52.2 | 43.1 | 49.5 | 45.1 | 43.0 | 31.3 | 31.9 | 40.8 |
| | 45.8 | 43.1 | 41.3 | 49.7 | 52.6 | 51.5 | 45.0 | 42.2 | 30.1 | 30.5 | 35.4 |
| | 52.1 | 52.4 | 52.0 | 53.2 | 59.7 | 64.0 | 46.1 | 52.4 | 36.0 | 36.0 | 41.7 |
| | 54.0 | 54.9 | 53.2 | 56.2 | 51.7 | 59.5 | 56.7 | 46.4 | 35.9 | 32.1 | 36.4 |
| Mean | 45.5 | 1.0 | 41.4 | 46.9 | 43.3 | 53.1 | 42.6 | 40.8 | 27.0 | 29.0 | 32.4 |
| Std Dev | 3.4 | 0.2 | 3.7 | 4.8 | 3.6 | 2.1 | 5.6 | 6.4 | 5.2 | 4.4 | 1.0 |
| SEM | 1.7 | 0.1 | 1.8 | 2.4 | 1.8 | 1.1 | 2.8 | 3.2 | 2.6 | 2.2 | 0.5 |
| CV% | 7.4 | 20.4 | 8.8 | 10.2 | 8.4 | 4.0 | 13.1 | 15.7 | 19.4 | 15.2 | 3.1 |
| Relative Trar | 100 | 2.2 | 91.1 | 103.2 | 95.3 | 116.7 | 93.6 | 89.8 | 59.5 | 63.8 | 71.2 |

Fold Induction (1000nM DHT)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 50.9 | 48.9 | 48.3 | 52.8 | 51.8 | 56.1 | 48.2 | 46.0 | 33.3 | 32.6 | 38.6 | |
| Std Dev | 3.6 | 5.6 | 5.4 | 2.7 | 6.8 | 6.8 | 5.7 | 4.6 | 3.1 | 2.4 | 3.1 | |
| SEM | 1.8 | 2.8 | 2.7 | 1.3 | 3.4 | 3.4 | 2.8 | 2.3 | 1.5 | 1.2 | 1.6 | |
| CV% | 7.0 | 11.6 | 11.2 | 5.1 | 13.2 | 12.2 | 11.7 | 10.0 | 9.2 | 7.3 | 8.1 | |
| Relative Trar | 100 | 95.9 | 94.9 | 103.7 | 101.6 | 110.2 | 94.6 | 90.3 | 65.4 | 64.0 | 75.7 | |




**Subtraction of VC from wells**

| Methoxycinnamate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -20738 | 940263 | -1438 | 745113 | 854413 | 869413 | 1102913 | 826213 | 836013 | 510413 | 502613 | 620513 | with 1nM DHT |
| B | -20688 | 1001363 | 6263 | 923413 | 1089863 | 986713 | 1124863 | 1033763 | 948963 | 701363 | 670263 | 658713 | with 1nM DHT |
| C | -20738 | 833013 | -2988 | 817813 | 943863 | 816563 | 1068013 | 794113 | 639113 | 477013 | 501113 | 658113 | with 1nM DHT |
| D | -20688 | 915113 | -1838 | 867513 | 920463 | 839713 | 1025013 | 794413 | 879613 | 472013 | 648263 | 667313 | with 1nM DHT |
| E | -20738 | 1056263 | 914763 | 862113 | 1062013 | 872213 | 1005163 | 914363 | 870963 | 627863 | 640113 | 824513 | with 1000nM DHT |
| F | -20738 | 928363 | 873263 | 835463 | 1010163 | 1070963 | 1047713 | 911563 | 855013 | 603613 | 610913 | 712513 | with 1000nM DHT |
| G | -20738 | 1058963 | 1065713 | 1057613 | 1083313 | 1216763 | 1307463 | 935813 | 1065313 | 726113 | 726163 | 844013 | with 1000nM DHT |
| H | -20688 | 1099263 | 1117013 | 1082363 | 1143963 | 1050863 | 1214013 | 1154263 | 941613 | 722863 | 645313 | 734963 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl: 987288

| Methoxycinnamate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -20713 | 922438 | 0 | 838463 | 952150 | 878100 | 1080200 | 862125 | 825925 | 540200 | 580563 | 651163 |
| Std Dev | 29 | 69755 | 4226 | 75721 | 99315 | 75570 | 43607 | 115412 | 132943 | 108785 | 91320 | 20861 |
| SEM | 14 | 34878 | 2113 | 37861 | 49657 | 37785 | 21804 | 57706 | 66471 | 54393 | 45660 | 10431 |
| CV% | -0.1 | 7.6 | | 9.0 | 10.4 | 8.6 | 4.0 | 13.4 | 16.1 | 20.1 | 15.7 | 3.2 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.0 | 1.0 | 1.2 | 0.9 | 0.9 | 0.6 | 0.6 | 0.7 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| Methoxycinnamate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.5 | 112.1 | -0.2 | 88.9 | 101.9 | 103.7 | 131.5 | 98.5 | 99.7 | 60.9 | 59.9 | 74.0 | with 1nM DHT |
| B | -2.5 | 119.4 | 0.7 | 110.1 | 130.0 | 117.7 | 134.2 | 123.3 | 113.2 | 83.6 | 79.9 | 78.6 | with 1nM DHT |
| C | -2.5 | 99.4 | -0.4 | 97.5 | 112.6 | 97.4 | 127.4 | 94.7 | 76.2 | 56.9 | 59.8 | 78.5 | with 1nM DHT |
| D | -2.5 | 109.1 | -0.2 | 103.5 | 109.8 | 100.1 | 122.2 | 94.7 | 104.9 | 56.3 | 77.3 | 79.6 | with 1nM DHT |
| E | -2.1 | 107.0 | 92.7 | 96.4 | 107.6 | 88.3 | 101.8 | 92.6 | 88.2 | 63.6 | 64.8 | 83.5 | with 1000nM DHT |
| F | -2.1 | 94.0 | 88.5 | 84.6 | 102.3 | 108.5 | 106.1 | 92.3 | 86.6 | 61.1 | 61.9 | 72.2 | with 1000nM DHT |
| G | -2.1 | 107.3 | 107.9 | 107.1 | 109.7 | 123.2 | 132.4 | 94.8 | 107.9 | 73.5 | 73.6 | 85.5 | with 1000nM DHT |
| H | -2.1 | 111.3 | 113.1 | 109.6 | 115.9 | 106.4 | 123.0 | 116.9 | 95.4 | 73.2 | 65.4 | 74.4 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Methoxycinnamate ant | blank | 10nM DHT | neg. control | induced con | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.5 | 110.0 | 0.0 | 100.0 | 113.6 | 104.7 | 128.8 | 102.8 | 98.5 | 64.4 | 69.2 | 77.7 |
| Std Dev | 0.0 | 8.3 | 0.5 | 9.0 | 11.8 | 9.0 | 5.2 | 13.8 | 15.9 | 13.0 | 10.9 | 2.5 |
| SEM | 0.0 | 4.2 | 0.3 | 4.5 | 5.9 | 4.5 | 2.6 | 6.9 | 7.9 | 6.5 | 5.4 | 1.2 |

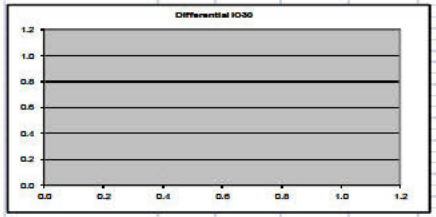
**High Agonist control, % of Maximal Induction Control (Average)**

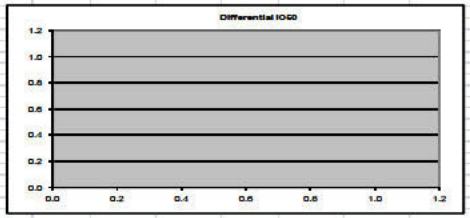
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.1 | 104.9 | 100.5 | 99.5 | 108.9 | 106.6 | 115.8 | 99.2 | 94.5 | 67.9 | 66.4 | 78.9 |
| Std Dev | 0.0 | 7.5 | 11.9 | 11.4 | 5.6 | 14.3 | 14.3 | 11.9 | 9.7 | 6.4 | 5.0 | 6.6 |
| SEM | 0.0 | 3.8 | 5.9 | 5.7 | 2.8 | 7.2 | 7.2 | 5.9 | 4.8 | 3.2 | 2.5 | 3.3 |

| Methoxycinnamate ant | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|
| Differential | 0.4 | -5.1 | 100.5 | -0.5 | -4.7 | 1.9 | -13.0 | -3.7 | -4.0 | 3.4 | -2.8 | 1.2 |

Relative Inhibitory Concentration Max (RICMax)

| Differential IC30 | | | Differential IC50 | | | 100.0 | 64.4 | 35.6 |
|---|---|---|---|---|---|---|---|---|

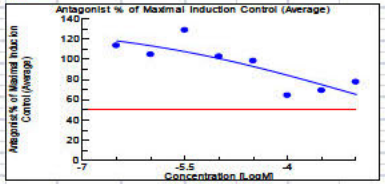



**Viability (% Control)**

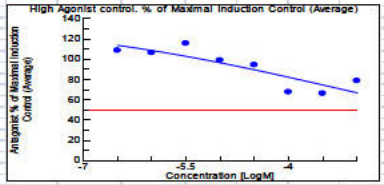
| Methoxycinnamate | 10nM DHT | neg. cont | Induced ( | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 103 | 100 | 103 | 105 | 110 | 107 | 102 | 100 | 89 | 90 | 91 |
| StdDev | 5 | 5 | 5 | 6 | 9 | 6 | 9 | 2 | 6 | 5 | 4 |
| SEM | 3 | 3 | 3 | 4 | 6 | 4 | 6 | 1 | 4 | 3 | 2 |
| %CV | 4.8 | 4.9 | 5.2 | 5.7 | 7.8 | 5.9 | 8.3 | 2.2 | 6.9 | 5.6 | 4.6 |

Fit: >-3
Chart: #Ok




0 Bottom
136.4 Top
-3.1 EC50
-0.2 Hill slope

Fit: >-3
Chart: #Ok




0 Bottom
141.0 Top
-3.2 EC50
-0.2 Hill slope

# Data Spreadsheets

Experiment date: 20Oct2011
TopCount Model B9912V, Serial# 408672
11/11/11 13:23
Assay Conducted by: [redacted]

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Methoxycinnamate

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Methoxycinnamate | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 526300 | 10050 | 9700 | 8100 | 7750 | 8050 | 8750 | 14900 | 12000 | 7050 | 4600 | |
| B | 150 | 631850 | 10750 | 7900 | 9550 | 10150 | 9550 | 9000 | 15100 | 12600 | 8750 | 4250 | |
| C | 50 | 464800 | 9550 | 7700 | 10700 | 10700 | 10200 | 12650 | 13800 | 12700 | 8500 | 6500 | |
| D | 0 | 521750 | 8800 | 9700 | 10550 | 9600 | 13050 | 11250 | 14750 | 11150 | 7800 | 4400 | |
| E | 50 | 529850 | 8600 | 8850 | 10750 | 9950 | 10450 | 9550 | 13650 | 9950 | 6400 | 4950 | |
| F | 0 | 525950 | 7900 | 8500 | 11150 | 9750 | 9750 | 10150 | 14300 | 11150 | 7750 | 5800 | |
| G | 50 | 57300 | 12200 | 13750 | 15800 | 13900 | 8100 | 4600 | 24250 | 11500 | 13050 | 1300 | with 10μM Nilutamide |
| H | 0 | 224400 | 18500 | 18000 | 18350 | 17050 | 19750 | 16800 | 22150 | 18350 | 10500 | 3000 | with 10μM Nilutamide |
| Mean | 42 | 533417 | 9000 | | 10133 | 9650 | 10175 | 10225 | 14417 | 11592 | 7708 | 5083 | |
| Std Dev | 58 | 54134 | 955 | | 1130 | 1006 | 1639 | 1488 | 599 | 1049 | 879 | 887 | |
| SEM | 24 | 22100 | 276 | | 461 | 411 | 669 | 607 | 244 | 428 | 359 | 362 | |
| CV% | 140.3 | 10.1 | 10.61 | | 11.2 | 10.4 | 16.1 | 14.6 | 4.2 | 9.0 | 11.4 | 17.4 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 25 | 140850 | 15613 | | 17075 | 15475 | 13925 | 10700 | 23200 | 14925 | 11775 | 2150 | |
| Std Dev | 35 | 118158 | 3117 | | 1803 | 2227 | 8238 | 8627 | 1485 | 4844 | 1803 | 1202 | |
| Mean VC | 9000 | | Mean Nilutamide Control | | 15613 | | | | | | | | |

**Subtraction of VC from wells**

| Methoxycinnamate | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 517300 | 1050 | 700 | -900 | -1250 | -950 | -250 | 5900 | 3000 | -1950 | -4400 | |
| B | 150 | 622850 | 1750 | -1100 | 550 | 1150 | 550 | 0 | 6100 | 3600 | -250 | -4750 | |
| C | 50 | 455800 | 550 | -1300 | 1700 | 1700 | 1200 | 3650 | 4800 | 3700 | -500 | -2500 | |
| D | 0 | 512750 | -200 | 700 | 1550 | 600 | 4050 | 2250 | 5750 | 2150 | -1200 | -4600 | |
| E | 50 | 520850 | -400 | -150 | 1750 | 950 | 1450 | 550 | 4650 | 950 | -2600 | -4050 | |
| F | 0 | 516950 | -1100 | -500 | 2150 | 750 | 750 | 1150 | 5300 | 2150 | -1250 | -3200 | |
| G | 50 | 41688 | -3413 | -1863 | 188 | -1713 | -7513 | -11013 | 8638 | -4113 | -2563 | -14313 | with 10μM Nilutamide |
| H | 0 | 206788 | 2888 | 2388 | 2738 | 1438 | 4138 | 1188 | 6538 | 2738 | -5113 | -12613 | with 10μM Nilutamide |

**Corrected Data Means**

| Methoxycinnamate | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 42 | 524417 | 0 | | 1133 | 650 | 1175 | 1225 | 5417 | 2592 | -1292 | -3917 |
| Std Dev | 58 | 54134 | 955 | | 1130 | 1006 | 1639 | 1488 | 599 | 1049 | 879 | 887 |
| SEM | 24 | 22100 | 276 | | 461 | 411 | 669 | 607 | 244 | 428 | 359 | 362 |
| CV% | 140.3 | 10.3 | | | 99.7 | 154.8 | 130.5 | 121.5 | 11.1 | 40.5 | -68.1 | -22.6 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Agonist: % of Maximal Induction Control**

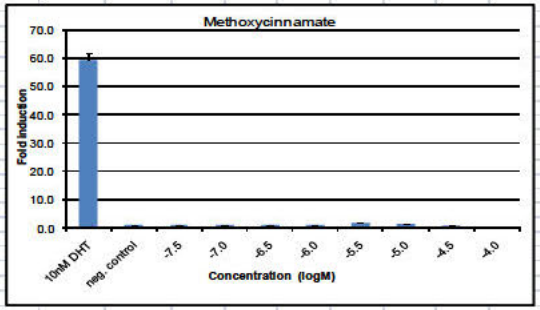
| Methoxycinnamate | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 98.6 | 0.2 | 0.1 | -0.2 | -0.2 | -0.2 | 0.0 | 1.1 | 0.6 | -0.4 | -0.8 | |
| B | 0.0 | 118.8 | 0.3 | -0.2 | 0.1 | 0.2 | 0.1 | 0.0 | 1.2 | 0.7 | 0.0 | -0.9 | |
| C | 0.0 | 86.9 | 0.1 | -0.2 | 0.3 | 0.3 | 0.2 | 0.7 | 0.9 | 0.7 | -0.1 | -0.5 | |
| D | 0.0 | 97.8 | 0.0 | 0.1 | 0.3 | 0.1 | 0.8 | 0.4 | 1.1 | 0.4 | -0.2 | -0.9 | |
| E | 0.0 | 99.3 | -0.1 | 0.0 | 0.3 | 0.2 | 0.3 | 0.1 | 0.9 | 0.2 | -0.5 | -0.8 | |
| F | 0.0 | 98.6 | -0.2 | -0.1 | 0.4 | 0.1 | 0.1 | 0.2 | 1.0 | 0.4 | -0.2 | -0.6 | |
| G | 0.0 | 7.9 | -0.7 | -0.4 | 0.0 | -0.3 | -1.4 | -2.1 | 1.6 | -0.8 | -0.5 | -2.7 | with 10μM Nilutamide |
| H | 0.0 | 39.8 | 0.6 | 0.5 | 0.5 | 0.3 | 0.8 | 0.2 | 1.2 | 0.5 | -1.0 | -2.4 | with 10μM Nilutamide |

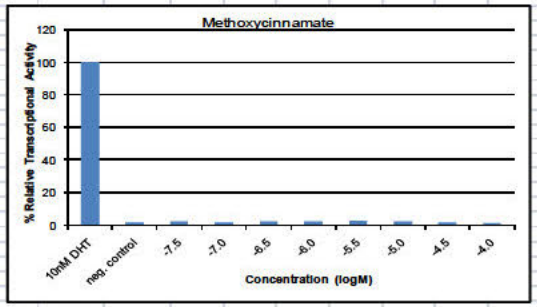
**% of Maximal Induction Control**

| Methoxycinnamate | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.2 | 0.1 | 0.2 | 0.2 | 1.0 | 0.5 | -0.2 | -0.7 |
| Std Dev | 0.0 | 10.3 | 0.2 | | 0.2 | 0.2 | 0.3 | 0.3 | 0.1 | 0.2 | 0.2 | 0.2 |
| SEM | 0.0 | 4.2 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 |

**FOLD INDUCTION**

| | 10nM DH | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 58.5 | 1.1 | 1.1 | 0.9 | 0.9 | 0.9 | 1.0 | 1.7 | 1.3 | 0.8 | 0.5 |
| | 70.2 | 1.2 | 0.9 | 1.1 | 1.1 | 1.1 | 1.0 | 1.7 | 1.4 | 1.0 | 0.5 |
| | 51.6 | 1.1 | 0.9 | 1.2 | 1.2 | 1.1 | 1.4 | 1.5 | 1.4 | 0.9 | 0.7 |
| | 58.0 | 1.0 | 1.1 | 1.2 | 1.1 | 1.5 | 1.3 | 1.6 | 1.2 | 0.9 | 0.5 |
| | 58.9 | 1.0 | 1.0 | 1.2 | 1.1 | 1.2 | 1.1 | 1.5 | 1.1 | 0.7 | 0.6 |
| | 58.4 | 0.9 | 0.9 | 1.2 | 1.1 | 1.1 | 1.1 | 1.6 | 1.2 | 0.9 | 0.6 |
| Mean | 59.3 | 1.0 | | 1.1 | 1.1 | 1.1 | 1.1 | 1.6 | 1.3 | 0.9 | 0.6 |
| Std Dev | 6.0 | 0.1 | | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| SEM | 2.5 | 0.0 | | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| CV% | 10.1 | 10.6 | | 11.2 | 10.4 | 16.1 | 14.6 | 4.2 | 9.0 | 11.4 | 17.4 |
| Relative Tran | 100 | 1.7 | | 1.9 | 1.8 | 1.9 | 1.9 | 2.7 | 2.2 | 1.4 | 1.0 |



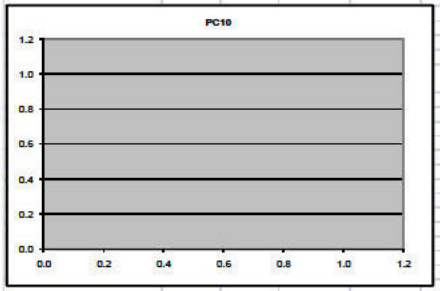



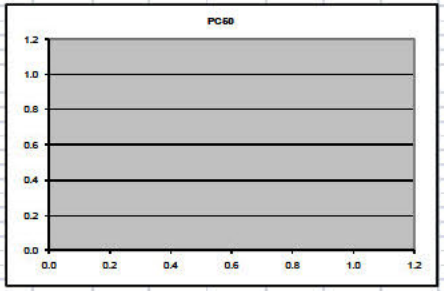

**Viability (% Control)**

| Methoxycinnamate | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 97 | 100 | 102 | 104 | 107 | 99 | 102 | 99 | 103 | 100 | 80 |
| StdDev | 5 | 4 | 7 | 6 | 6 | 6 | 12 | 5 | 9 | 11 | 3 |
| SEM | 2 | 2 | 3 | 2 | 2 | 3 | 5 | 2 | 4 | 5 | 1 |
| %CV | 5.3 | 4.5 | 6.9 | 5.9 | 5.6 | 6.3 | 11.7 | 5.1 | 9.0 | 11.1 | 4.3 |

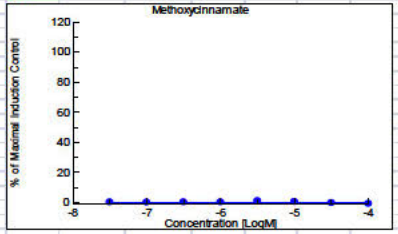
PC10 [redacted]

PC50 [redacted]




Fit: #interse
Chart: ct #Ok




0 Bottom
0.0 Top
-4.8 EC50
45.8 Hill slope

# Data Spreadsheets

Experiment date: 20Oct2011
TopCount Model B9912V, Serial# 408672
11/11/11 13:23
Assay Conducted by:

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Methoxycinnamate

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Methoxycinnamate | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 508300 | 10360 | 499000 | 440500 | 503050 | 546900 | 453000 | 444900 | 399600 | 349350 | 220150 | with 1nM DHT |
| B | 200 | 467250 | 9350 | 387350 | 357450 | 388750 | 413900 | 312250 | 489750 | 437300 | 450000 | 201000 | with 1nM DHT |
| C | 0 | 518250 | 8250 | 496100 | 507300 | 478550 | 385250 | 339350 | 443600 | 491600 | 393050 | 184400 | with 1nM DHT |
| D | 0 | 533100 | 8550 | 463150 | 434450 | 435550 | 450400 | 436600 | 464700 | 350100 | 351550 | 232650 | with 1nM DHT |
| E | 0 | 496750 | 413100 | 476250 | 466850 | 456000 | 528650 | 513350 | 433300 | 513650 | 448350 | 273700 | with 1000nM DHT |
| F | 0 | 483150 | 526250 | 443250 | 439250 | 471500 | 430700 | 356500 | 358900 | 385375 | 379400 | 164700 | with 1000nM DHT |
| G | 50 | 417050 | 400750 | 483300 | 472150 | 462700 | 410550 | 410450 | 462050 | 452200 | 423100 | 202250 | with 1000nM DHT |
| H | 0 | 497500 | 372050 | 477050 | 364700 | 463400 | 465750 | 344950 | 400350 | 295600 | 292350 | 191400 | with 1000nM DHT |
| | | | | | | | | | | | | | Fold Induction (1nM DH |
| Mean | 50 | 506725 | 9125 | 461400 | 434925 | 451475 | 449113 | 385275 | 460738 | 419650 | 385988 | 209550 | |
| Std Dev | 100 | 28221 | 939 | 51975 | 61297 | 50269 | 70433 | 69887 | 21617 | 59798 | 47172 | 21226 | |
| SEM | 50 | 14110 | 470 | 25988 | 30648 | 25135 | 35216 | 34943 | 10809 | 29899 | 23586 | 10613 | |
| CV% | 200.0 | 5.6 | 10.3 | 11.3 | 14.1 | 11.1 | 15.7 | 18.1 | 4.7 | 14.2 | 12.2 | 10.1 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.9 | 0.8 | 0.8 | 0.4 | Fold Induction (1000nM |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 474113 | 428038 | 469963 | 441238 | 468400 | 458963 | 406313 | 414375 | 411750 | 384050 | 208013 | |
| Std Dev | 25 | 38459 | 67695 | 18085 | 40491 | 11844 | 51874 | 76857 | 44294 | 93539 | 68809 | 46547 | |
| SEM | 13 | 19230 | 33848 | 9043 | 20245 | 5922 | 25937 | 38428 | 22147 | 46769 | 34404 | 23274 | |
| CV% | 200.0 | 8.1 | 15.8 | 3.8 | 9.2 | 2.5 | 11.3 | 18.9 | 10.7 | 22.7 | 17.9 | 22.4 | |

Mean VC: 9125 Mean DHT 1000nM Control: 428038

**Subtraction of VC from wells**

| Methoxycinnamate | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -9125 | 499175 | 1225 | 489875 | 431375 | 493925 | 537775 | 443875 | 435775 | 390475 | 340225 | 211025 | with 1nM DHT |
| B | -8925 | 458125 | 225 | 378225 | 348325 | 379625 | 404775 | 303125 | 480625 | 428175 | 440875 | 191875 | with 1nM DHT |
| C | -9125 | 509125 | -875 | 486975 | 498175 | 469425 | 376125 | 330225 | 434475 | 482475 | 383925 | 175275 | with 1nM DHT |
| D | -9125 | 523975 | -575 | 454025 | 425325 | 426425 | 441275 | 427375 | 455575 | 340975 | 342425 | 223525 | with 1nM DHT |
| E | -9125 | 487625 | 403975 | 467125 | 459725 | 446875 | 519725 | 504225 | 426175 | 504725 | 439225 | 264575 | with 1000nM DHT |
| F | -9125 | 476025 | 517125 | 434125 | 430125 | 462375 | 421575 | 347375 | 350675 | 376225 | 363275 | 155575 | with 1000nM DHT |
| G | -9075 | 407925 | 391625 | 474175 | 463025 | 453575 | 401425 | 401325 | 452925 | 443075 | 413975 | 193125 | with 1000nM DHT |
| H | -9125 | 488375 | 362925 | 467925 | 375575 | 474275 | 456625 | 335825 | 391225 | 286475 | 283225 | 182275 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl: 439875

| Methoxycinnamate | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -9075 | 497600 | 0 | 452275 | 425800 | 442350 | 439988 | 376150 | 451613 | 410525 | 376863 | 200425 |
| Std Dev | 100 | 28221 | 939 | 51975 | 61297 | 50269 | 70433 | 69887 | 21617 | 59798 | 47172 | 21226 |
| SEM | 50 | 14110 | 470 | 25988 | 30648 | 25135 | 35216 | 34943 | 10809 | 29899 | 23586 | 10613 |
| CV% | -1.1 | 5.7 | | 11.5 | 14.4 | 11.4 | 16.0 | 18.6 | 4.8 | 14.6 | 12.5 | 10.6 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.9 | 0.8 | 0.8 | 0.4 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))**

| Methoxycinnamate | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.0 | 110.4 | 0.3 | 108.3 | 95.4 | 109.2 | 118.9 | 98.1 | 96.4 | 86.3 | 75.2 | 46.7 | with 1nM DHT |
| B | -2.0 | 101.3 | 0.0 | 83.6 | 77.0 | 83.5 | 89.5 | 67.0 | 106.3 | 94.7 | 97.5 | 42.4 | with 1nM DHT |
| C | -2.0 | 112.6 | -0.2 | 107.7 | 110.1 | 103.8 | 83.2 | 73.0 | 96.1 | 106.7 | 84.9 | 38.8 | with 1nM DHT |
| D | -2.0 | 115.9 | -0.1 | 100.4 | 94.0 | 94.3 | 97.6 | 94.5 | 100.7 | 75.4 | 75.7 | 49.4 | with 1nM DHT |
| E | -2.1 | 110.9 | 91.8 | 106.2 | 104.5 | 101.6 | 118.2 | 114.6 | 96.9 | 114.7 | 99.9 | 60.1 | with 1000nM DHT |
| F | -2.1 | 108.2 | 117.6 | 98.7 | 97.8 | 105.1 | 95.8 | 79.0 | 79.7 | 85.5 | 82.6 | 35.4 | with 1000nM DHT |
| G | -2.1 | 92.7 | 89.0 | 107.8 | 105.3 | 103.1 | 91.3 | 91.2 | 103.0 | 100.7 | 94.1 | 43.9 | with 1000nM DHT |
| H | -2.1 | 111.0 | 82.5 | 106.4 | 85.4 | 107.8 | 103.8 | 76.3 | 88.9 | 65.1 | 64.4 | 41.4 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Methoxycinnamate | blank | 10nM DHT | neg. control | Induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.0 | 110.0 | 0.0 | 100.0 | 94.1 | 97.8 | 97.3 | 83.2 | 99.9 | 90.8 | 83.3 | 44.3 |
| Std Dev | 0.0 | 6.2 | 0.2 | 11.5 | 13.6 | 11.1 | 15.6 | 15.5 | 4.8 | 13.2 | 10.4 | 4.7 |
| SEM | 0.0 | 3.1 | 0.1 | 5.7 | 6.8 | 5.6 | 7.8 | 7.7 | 2.4 | 6.6 | 5.2 | 2.3 |

**High Agonist control, % of Maximal Induction Control (Average)**

| Mean | -2.1 | 105.7 | 95.2 | 104.8 | 98.2 | 104.4 | 102.3 | 90.3 | 92.1 | 91.5 | 85.2 | 45.2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Std Dev | 0.0 | 8.7 | 15.4 | 4.1 | 9.2 | 2.7 | 11.8 | 17.5 | 10.1 | 21.3 | 15.6 | 10.6 |
| SEM | 0.0 | 4.4 | 7.7 | 2.1 | 4.6 | 1.3 | 5.9 | 8.7 | 5.0 | 10.6 | 7.8 | 5.3 |

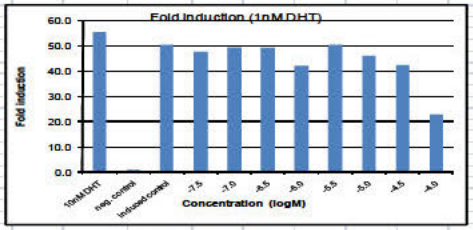
| Methoxycinnamate | | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | -0.1 | -4.3 | 95.2 | 4.8 | 4.1 | 6.6 | 5.0 | 7.1 | -7.7 | 0.8 | 1.9 | 0.9 |

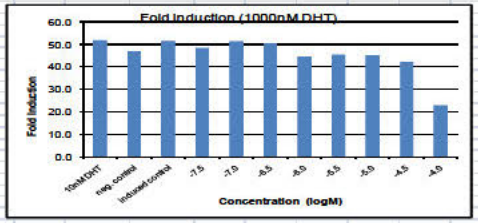
Relative Inhibitory Concentration Max (RICMax)

| Differential IC30 | | Differential IC50 | | 100.0 | 44.3 | 55.7 |
|---|---|---|---|---|---|---|

**FOLD INDUCTION**

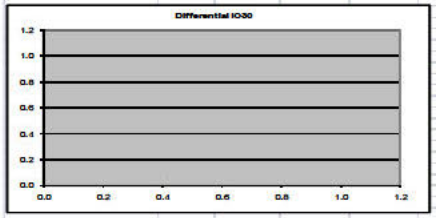
| | 10nM DH | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 55.7 | 1.1 | 54.7 | 48.3 | 55.1 | 59.9 | 49.6 | 48.8 | 43.8 | 38.3 | 24.1 |
| | 51.2 | 1.0 | 42.4 | 39.2 | 42.6 | 45.4 | 34.2 | 53.7 | 47.9 | 49.3 | 22.0 |
| | 56.8 | 0.9 | 54.4 | 55.6 | 52.4 | 42.2 | 37.2 | 48.6 | 53.9 | 43.1 | 20.2 |
| | 58.4 | 0.9 | 50.8 | 47.6 | 47.7 | 49.4 | 47.8 | 50.9 | 38.4 | 38.5 | 25.5 |
| | 54.4 | 45.3 | 52.2 | 51.4 | 50.0 | 58.0 | 56.3 | 47.7 | 56.3 | 49.1 | 30.0 |
| | 53.2 | 57.7 | 48.6 | 48.1 | 51.7 | 47.2 | 39.1 | 39.4 | 42.2 | 40.6 | 18.0 |
| | 45.7 | 43.9 | 53.0 | 51.7 | 50.7 | 45.0 | 45.0 | 50.6 | 49.6 | 46.4 | 22.2 |
| | 54.5 | 40.8 | 52.3 | 42.2 | 53.0 | 51.0 | 37.8 | 43.9 | 32.4 | 32.0 | 21.0 |
| Mean | 55.5 | 1.0 | 50.6 | 47.7 | 49.5 | 49.2 | 42.2 | 50.5 | 46.0 | 42.3 | 23.0 |
| Std Dev | 3.1 | 0.1 | 5.7 | 6.7 | 5.5 | 7.7 | 7.7 | 2.4 | 6.6 | 5.2 | 2.3 |
| SEM | 1.6 | 0.1 | 2.8 | 3.4 | 2.8 | 3.9 | 3.8 | 1.2 | 3.3 | 2.6 | 1.2 |
| CV% | 5.6 | 10.3 | 11.3 | 14.1 | 11.1 | 15.7 | 18.1 | 4.7 | 14.2 | 12.2 | 10.1 |
| Relative Trar | 100 | 1.8 | 91.1 | 85.8 | 89.1 | 88.6 | 76.0 | 90.9 | 82.8 | 76.2 | 41.4 |
| Mean | 52.0 | 46.9 | 51.5 | 48.4 | 51.3 | 50.3 | 44.5 | 45.4 | 45.1 | 42.1 | 22.8 |
| Std Dev | 4.2 | 7.4 | 2.0 | 4.4 | 1.3 | 5.7 | 8.4 | 4.9 | 10.3 | 7.5 | 5.1 |
| SEM | 2.1 | 3.7 | 1.0 | 2.2 | 0.6 | 2.8 | 4.2 | 2.4 | 5.1 | 3.8 | 2.6 |
| CV% | 8.1 | 15.8 | 3.8 | 9.2 | 2.5 | 11.3 | 18.9 | 10.7 | 22.7 | 17.9 | 22.4 |
| Relative Trar | 100 | 90.3 | 99.1 | 93.1 | 98.8 | 96.8 | 85.7 | 87.4 | 86.8 | 81.0 | 43.9 |

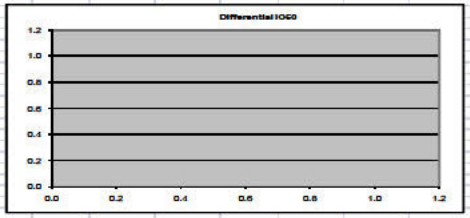


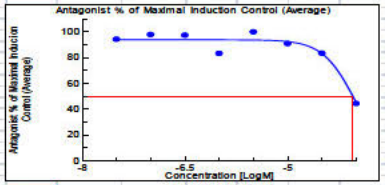

**Viability (% Control)**

| Methoxycinnamate | 10nM DHT | neg. con | Induced c | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 97 | 100 | 102 | 104 | 107 | 99 | 102 | 99 | 103 | 100 | 80 |
| StdDev | 5 | 4 | 7 | 6 | 6 | 6 | 12 | 5 | 9 | 11 | 9 |
| SEM | 2 | 2 | 3 | 2 | 2 | 3 | 5 | 2 | 4 | 5 | 4 |
| %CV | 5.3 | 4.5 | 6.9 | 5.9 | 5.6 | 6.3 | 11.7 | 5.1 | 9.0 | 11.1 | 4.3 |



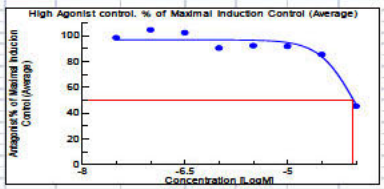




Fit Chart: -4.1 #Ok




0 Bottom
94.2 Top
-4.0 EC50
-1.8 Hill slope

Fit Chart: -4.0 #Ok




0 Bottom
97.2 Top
-4.0 EC50
-1.7 Hill slope

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 13oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 13:23 | | Study Number: | 9070-100107 |
| Assay Conducted by: | [redacted] | Compound | Octylsalicylate |

| Octylsalicylate ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1363200 | 23700 | 20050 | 21600 | 30650 | 27600 | 22950 | 19550 | 17800 | 10250 | 14150 | |
| B | 100 | 1403550 | 25000 | 25900 | 33400 | 34250 | 26700 | 22800 | 20050 | 18250 | 17150 | 11250 | |
| C | 50 | 1286600 | 27550 | 28450 | 36450 | 40050 | 32450 | 24750 | 23650 | 19850 | 11800 | 14850 | |
| D | 0 | 1118550 | 20650 | 32950 | 30800 | 35500 | 35450 | 23900 | 19250 | 16800 | 14150 | 14500 | |
| E | 50 | 1353800 | 29350 | 26050 | 45200 | 48650 | 37300 | 26150 | 19450 | 17800 | 14450 | 12350 | |
| F | 50 | 1318250 | 27550 | 27400 | 30800 | 44750 | 36100 | 23850 | 22050 | 20100 | 11800 | 10750 | |
| G | *0* | *435700* | *81100* | *21700* | *28800* | *84900* | *79150* | *28350* | *36000* | *26200* | *15400* | *16300* | with 10µM Nilutamide |
| H | *0* | *232500* | *17400* | *25400* | *17650* | *30150* | *27000* | *21450* | *28950* | *21500* | *18300* | *15100* | with 10µM Nilutamide |
| Mean | 50 | 1307325 | 26217 | | 33042 | 38975 | 32600 | 24067 | 20667 | 18433 | 13267 | 12975 | |
| Std Dev | 32 | 100723 | 3594 | | 7753 | 6809 | 4523 | 1244 | 1785 | 1288 | 2476 | 1763 | |
| SEM | 13 | 41120 | 1037 | | 3165 | 2780 | 1847 | 508 | 729 | 526 | 1011 | 720 | |
| CV% | *63.2* | *7.7* | *13.71* | | *23.5* | *17.5* | *13.9* | *5.2* | *8.6* | *7.0* | *18.7* | *13.6* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 334100 | 36400 | | 23225 | 57525 | 53075 | 24900 | 32475 | 23850 | 16850 | 15700 | |
| Std Dev | 0 | 143684 | 29979 | | 7884 | 38714 | 36876 | 4879 | 4985 | 3323 | 2051 | 849 | |

Mean VC 26217 Mean Nilutamide Control 36400

**Subtraction of VC from wells**

| Octylsalicylate ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1336983 | -2517 | -6167 | -4617 | 4433 | 1383 | -3267 | -6667 | -8417 | -15967 | -12067 | |
| B | 100 | 1377333 | -1217 | -317 | 7183 | 8033 | 483 | -3417 | -6167 | -7967 | -9067 | -14967 | |
| C | 50 | 1260383 | 1333 | 2233 | 10233 | 13833 | 6233 | -1467 | -2567 | -6367 | -14417 | -11367 | |
| D | 0 | 1092333 | -5567 | 6733 | 4583 | 9283 | 9233 | -2317 | -6967 | -9417 | -12067 | -11717 | |
| E | 50 | 1327583 | 3133 | -167 | 18983 | 22433 | 11083 | -67 | -6767 | -8417 | -11767 | -13867 | |
| F | 50 | 1292033 | 1333 | 1183 | 4583 | 18533 | 9883 | -2367 | -4167 | -6117 | -14417 | -15467 | |
| G | 0 | 399300 | 44700 | -14700 | -7600 | 48500 | 42750 | -8050 | -400 | -10200 | -21000 | -20100 | with 10µM Nilutamide |
| H | 0 | 196100 | -19000 | -11000 | -18750 | -6250 | -9400 | -14950 | -7450 | -14900 | -18100 | -21300 | with 10µM Nilutamide |

**Corrected Data Means**

| Octylsalicylate ag | blank | 10nM DHT | neg. control | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 50 | 1281108 | 0 | | 6825 | 12758 | 6383 | -2150 | -5550 | -7783 | -12950 | -13242 |
| Std Dev | 32 | 100723 | 3594 | | 7753 | 6809 | 4523 | 1244 | 1785 | 1288 | 2476 | 1763 |
| SEM | 13 | 41120 | 1037 | | 3165 | 2780 | 1847 | 508 | 729 | 526 | 1011 | 720 |
| CV% | *63.2* | *7.9* | | | *113.6* | *53.4* | *70.9* | *-57.8* | *-32.2* | *-16.5* | *-19.1* | *-13.3* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

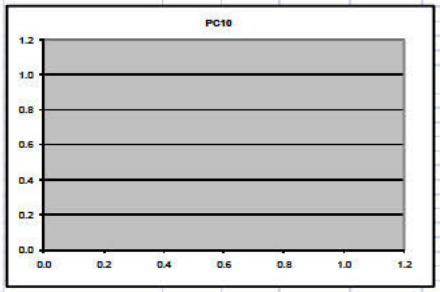
**Agonist: % of Maximal Induction Control**

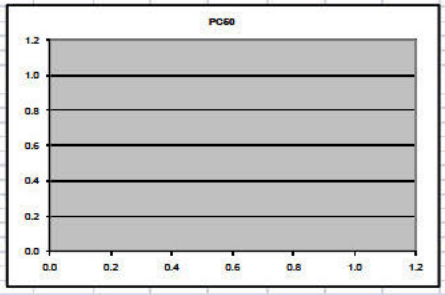
| Octylsalicylate ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 104.4 | -0.2 | -0.5 | -0.4 | 0.3 | 0.1 | -0.3 | -0.5 | -0.7 | -1.2 | -0.9 | |
| B | 0.0 | 107.5 | -0.1 | 0.0 | 0.6 | 0.6 | 0.0 | -0.3 | -0.5 | -0.6 | -0.7 | -1.2 | |
| C | 0.0 | 98.4 | 0.1 | 0.2 | 0.8 | 1.1 | 0.5 | -0.1 | -0.2 | -0.5 | -1.1 | -0.9 | |
| D | 0.0 | 85.3 | -0.4 | 0.5 | 0.4 | 0.7 | 0.7 | -0.2 | -0.5 | -0.7 | -0.9 | -0.9 | |
| E | 0.0 | 103.6 | 0.2 | 0.0 | 1.5 | 1.6 | 0.9 | 0.0 | -0.5 | -0.7 | -0.9 | -1.1 | |
| F | 0.0 | 100.9 | 0.1 | 0.1 | 0.4 | 1.4 | 0.8 | -0.2 | -0.3 | -0.5 | -1.1 | -1.2 | |
| G | 0.0 | 31.2 | 3.5 | -1.1 | -0.6 | 3.8 | 3.3 | -0.6 | 0.0 | -0.8 | -1.6 | -1.6 | with 10µM Nilutamide |
| H | 0.0 | 15.3 | -1.5 | -0.9 | -1.5 | -0.5 | -0.7 | -1.2 | -0.6 | -1.2 | -1.4 | -1.7 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Octylsalicylate ag | blank | 10nM DHT | neg. control | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.5 | 1.0 | 0.5 | -0.2 | -0.4 | -0.6 | | |
| Std Dev | 0.0 | 7.9 | 0.3 | | 0.6 | 0.5 | 0.4 | 0.1 | 0.1 | 0.1 | | |
| SEM | 0.0 | 3.2 | 0.1 | | 0.2 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | | |

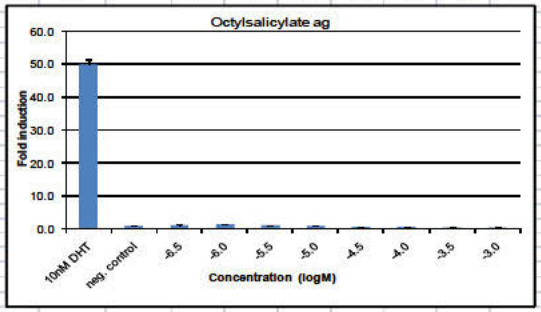
PC10 [ ] [ ] PC50 [ ] [ ]

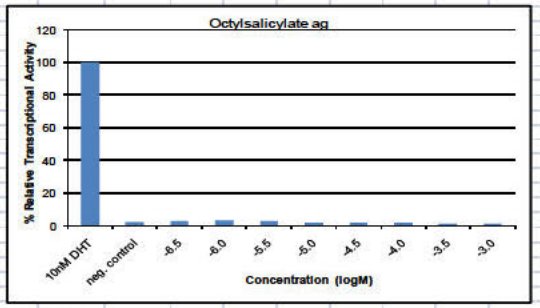



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 52.0 | 0.9 | 0.8 | 0.8 | 1.2 | 1.1 | 0.9 | 0.7 | 0.7 | 0.4 | 0.5 |
| | 53.5 | 1.0 | 1.0 | 1.3 | 1.3 | 1.0 | 0.9 | 0.8 | 0.7 | 0.7 | 0.4 |
| | 49.1 | 1.1 | 1.1 | 1.4 | 1.5 | 1.2 | 0.9 | 0.9 | 0.8 | 0.5 | 0.6 |
| | 42.7 | 0.8 | 1.3 | 1.2 | 1.4 | 1.4 | 0.9 | 0.7 | 0.6 | 0.5 | 0.6 |
| | 51.6 | 1.1 | 1.0 | 1.7 | 1.9 | 1.4 | 1.0 | 0.7 | 0.7 | 0.6 | 0.5 |
| | 50.3 | 1.1 | 1.0 | 1.2 | 1.7 | 1.4 | 0.9 | 0.8 | 0.8 | 0.5 | 0.4 |
| Mean | 49.9 | 1.0 | | 1.3 | 1.5 | 1.2 | 0.9 | 0.8 | 0.7 | 0.5 | 0.5 |
| Std Dev | 3.8 | 0.1 | | 0.3 | 0.3 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 |
| SEM | 1.6 | 0.0 | | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CV% | *7.7* | *13.7* | | *23.5* | *17.5* | *13.9* | *5.2* | *8.6* | *7.0* | *18.7* | *13.6* |
| Relative Tran | 100 | 2.0 | | 2.5 | 3.0 | 2.5 | 1.8 | 1.6 | 1.4 | 1.0 | 1.0 |

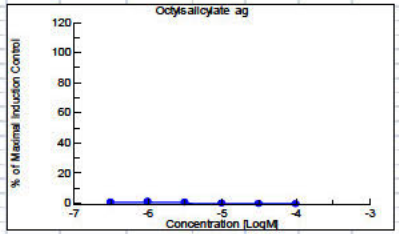



**Viability (% Control)**

| Octylsalicylate ag | 10nM DHT | neg. con | neg. con | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 103 | 100 | 97 | 96 | 104 | 95 | 97 | 97 | 88 | 70 | 66 |
| StdDev | 3 | 4 | 6 | 5 | 9 | 2 | 5 | 5 | 7 | 5 | 5 |
| SEM | 1 | 2 | 3 | 2 | 4 | 1 | 2 | 2 | 3 | 2 | 2 |
| %CV | 2.9 | 3.9 | 6.4 | 5.1 | 8.9 | 2.1 | 5.1 | 5.1 | 8.3 | 7.0 | 7.3 |

Fit Chart: #Interse ct #Ok




0 Bottom
0.8 Top
-5.5 EC50
-16.9 Hill slope

# Data Spreadsheets

Experiment date: 13Oct2011
TopCount Model 89912V. Serial# 408672
11/11/11 13:23
Assay Conducted by: [redacted]

blank = no cells. vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound Octylsalicylate

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Octylsalicylate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 100 | 1028550 | 19900 | 990400 | 1262850 | 1061850 | 1179050 | 980500 | 1044200 | 669550 | 404600 | 374000 | with 1nM DHT |
| B | 100 | 911550 | 23850 | 839700 | 1032350 | 1103900 | 1192050 | 977300 | 906750 | 651000 | 577300 | 290700 | with 1nM DHT |
| C | 50 | 1037200 | 26900 | 986450 | 1157250 | 1081750 | 1095650 | 931000 | 1007200 | 676500 | 429900 | 403450 | with 1nM DHT |
| D | 0 | 1139850 | 21350 | 1032250 | 1032250 | 1020400 | 1210500 | 924450 | 978000 | 644600 | 529900 | 454850 | with 1nM DHT |
| E | 0 | 1005400 | 925950 | 1042650 | 1165250 | 1063500 | 1189550 | 1209600 | 1440600 | 1503600 | 1219700 | 1305400 | with 1000nM DHT |
| F | 0 | 969550 | 842850 | 976900 | 1085450 | 1063850 | 1208600 | 1162100 | 1196050 | 1453100 | 1397450 | 1110300 | with 1000nM DHT |
| G | 0 | 815450 | 844700 | 1055450 | 1006450 | 1111100 | 1181000 | 1205300 | 1325450 | 1303050 | 1386650 | 1358650 | with 1000nM DHT |
| H | 50 | 700450 | 784150 | 874800 | 1008750 | 978500 | 1092950 | 1254050 | 1117150 | 1378500 | 1436500 | 1331000 | with 1000nM DHT |
| | | | | | | | | | | | | | Fold Induction (1nM DHT) |
| Mean | 63 | 1029288 | 23000 | 938975 | 1121175 | 1066975 | 1169313 | 953313 | 984038 | 635413 | 485425 | 380750 | |
| Std Dev | 48 | 93362 | 3069 | 70129 | 111311 | 35484 | 50775 | 29695 | 58212 | 61491 | 81721 | 68704 | |
| SEM | 24 | 46681 | 1535 | 35064 | 55656 | 17742 | 25388 | 14848 | 29106 | 30746 | 40860 | 34352 | |
| CV% | 76.6 | 9.1 | 13.3 | 7.5 | 9.9 | 3.3 | 4.3 | 3.1 | 5.9 | 9.7 | 16.8 | 18.0 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.1 | 1.0 | 1.1 | 0.9 | 1.0 | 0.6 | 0.5 | 0.4 | Fold Induction (1000nM DHT) |
| Mean | 13 | 872713 | 849413 | 987450 | 1061650 | 1054738 | 1168025 | 1232813 | 1269813 | 1460563 | 1360075 | 1296388 | |
| Std Dev | 25 | 141347 | 58259 | 82608 | 74696 | 55345 | 51362 | 48282 | 142607 | 59993 | 96002 | 125899 | |
| SEM | 13 | 70673 | 29130 | 41304 | 37348 | 27672 | 25681 | 24141 | 71304 | 29996 | 48001 | 62950 | |
| CV% | 200.0 | 16.2 | 6.9 | 8.4 | 7.0 | 5.2 | 4.4 | 3.9 | 11.2 | 4.1 | 7.1 | 9.7 | |

Mean VC 23000 Mean DHT 1000nM Control 849413

Subtraction of VC from wells

| Octylsalicylate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -22900 | 1005550 | -3100 | 967400 | 1239850 | 1038850 | 1156050 | 957500 | 1021200 | 646550 | 381600 | 351000 | with 1nM DHT |
| B | -22900 | 888550 | 850 | 816700 | 1009350 | 1080900 | 1169050 | 954300 | 883750 | 628000 | 554300 | 267700 | with 1nM DHT |
| C | -22950 | 1014200 | 3900 | 963450 | 1134250 | 1058750 | 1072650 | 908000 | 984200 | 653500 | 406900 | 380450 | with 1nM DHT |
| D | -23000 | 1116850 | -1650 | 916350 | 1009250 | 997400 | 1187500 | 901450 | 955000 | 521600 | 506900 | 431850 | with 1nM DHT |
| E | -23000 | 982400 | 902950 | 1019650 | 1142950 | 1040500 | 1166550 | 1266600 | 1417600 | 1482600 | 1196700 | 1362400 | with 1000nM DHT |
| F | -23000 | 946550 | 819850 | 953900 | 1042450 | 1042850 | 1185600 | 1159100 | 1173050 | 1430100 | 1374450 | 1087500 | with 1000nM DHT |
| G | -23000 | 792450 | 821700 | 1032450 | 983450 | 1098100 | 1168000 | 1182500 | 1302450 | 1482060 | 1363650 | 1335660 | with 1000nM DHT |
| H | -22950 | 677450 | 761150 | 851800 | 985750 | 955500 | 1069950 | 1231050 | 1094150 | 1365500 | 1413500 | 1308000 | with 1000nM DHT |

VC Corrected Data Means AVG cntrl 899431

| Octylsalicylate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -22938 | 1006288 | 0 | 915975 | 1098175 | 1043975 | 1146313 | 930313 | 961038 | 612413 | 462425 | 357750 |
| Std Dev | 48 | 93362 | 3069 | 70129 | 111311 | 35484 | 50775 | 29695 | 58212 | 61491 | 81721 | 68704 |
| SEM | 24 | 46681 | 1535 | 35064 | 55656 | 17742 | 25388 | 14848 | 29106 | 30746 | 40860 | 34352 |
| CV% | -0.2 | 9.3 | | 7.7 | 10.1 | 3.4 | 4.4 | 3.2 | 6.1 | 10.0 | 17.7 | 19.2 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.1 | 1.0 | 1.1 | 0.9 | 1.0 | 0.6 | 0.5 | 0.4 |

Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))

| Octylsalicylate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.5 | 109.8 | -0.3 | 105.6 | 135.4 | 113.4 | 126.2 | 104.5 | 111.5 | 70.6 | 41.7 | 38.3 | with 1nM DHT |
| B | -2.5 | 97.0 | 0.1 | 89.2 | 110.2 | 118.0 | 127.6 | 104.2 | 96.5 | 68.6 | 60.5 | 29.2 | with 1nM DHT |
| C | -2.5 | 110.7 | 0.4 | 105.2 | 123.8 | 115.6 | 117.1 | 99.1 | 107.4 | 71.3 | 44.4 | 41.5 | with 1nM DHT |
| D | -2.5 | 121.9 | -0.2 | 100.0 | 110.2 | 108.9 | 129.6 | 98.4 | 104.3 | 56.9 | 55.3 | 47.1 | with 1nM DHT |
| E | -2.6 | 109.7 | 100.8 | 113.9 | 127.6 | 116.2 | 130.3 | 141.5 | 158.3 | 165.6 | 133.6 | 152.2 | with 1000nM DHT |
| F | -2.6 | 105.7 | 91.6 | 106.5 | 116.4 | 116.5 | 132.4 | 129.4 | 131.0 | 159.7 | 153.5 | 121.4 | with 1000nM DHT |
| G | -2.6 | 88.5 | 91.8 | 115.3 | 109.8 | 121.5 | 129.3 | 132.1 | 145.5 | 165.5 | 152.3 | 149.2 | with 1000nM DHT |
| H | -2.6 | 75.7 | 85.0 | 95.1 | 110.1 | 106.7 | 119.5 | 137.5 | 122.2 | 151.4 | 157.9 | 146.1 | with 1000nM DHT |

Antagonist % of Maximal Induction Control (Average)

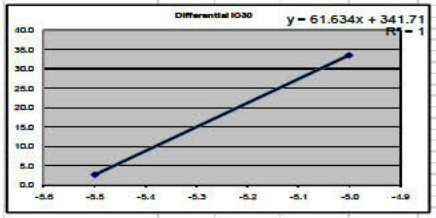
| Octylsalicylate ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.5 | 109.9 | 0.0 | 100.0 | 119.9 | 114.0 | 125.1 | 101.6 | 104.9 | 66.9 | | |
| Std Dev | 0.0 | 10.2 | 0.3 | 7.7 | 12.2 | 3.9 | 5.5 | 3.2 | 6.4 | 6.7 | | |
| SEM | 0.0 | 5.1 | 0.2 | 3.8 | 6.1 | 1.9 | 2.8 | 1.6 | 3.2 | 3.4 | | |

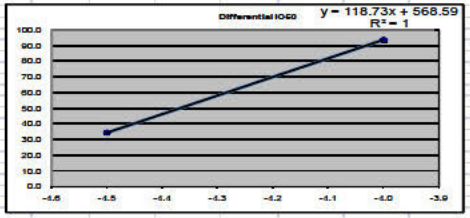
High Agonist control, % of Maximal Induction Control (Average)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.6 | 94.9 | 92.3 | 107.7 | 116.0 | 115.2 | 127.9 | 135.1 | 139.2 | 160.5 | | |
| Std Dev | 0.0 | 15.8 | 6.5 | 9.2 | 8.3 | 6.2 | 5.7 | 5.4 | 15.9 | 6.7 | | |
| SEM | 0.0 | 7.9 | 3.3 | 4.6 | 4.2 | 3.1 | 2.9 | 2.7 | 8.0 | 3.3 | | |

| Octylsalicylate ant | | | | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | -0.1 | -15.0 | 92.3 | 7.7 | -3.9 | 1.2 | 2.7 | 33.5 | 34.3 | 93.7 | | |

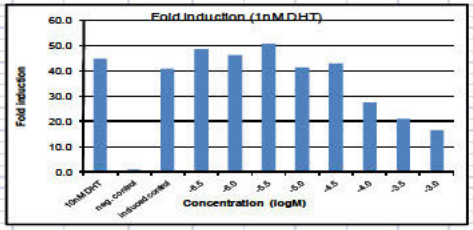
| -6.5 | -5.0 | | -4.5 | -4.0 | | Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|---|---|---|---|---|---|
| Differential IC30 | | Differential IC60 | | | | 100.0 | 66.9 | 33.1 |
| 2.7 | 33.5 | | 34.3 | 93.7 | | | | |
| -5.1 | | | -4.4 | | | | | |

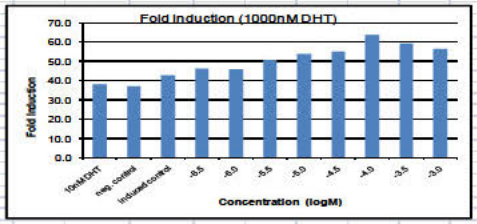



FOLD INDUCTION

| | 10nM DH | neg. control | Induced con | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 44.7 | 0.9 | 43.1 | 54.9 | 46.2 | 51.3 | 42.6 | 45.4 | 29.1 | 17.6 | 16.9 |
| | 39.6 | 1.0 | 36.5 | 44.9 | 48.0 | 51.8 | 42.5 | 39.4 | 28.3 | 25.1 | 12.6 |
| | 45.1 | 1.2 | 42.9 | 50.3 | 47.0 | 47.6 | 40.5 | 43.8 | 29.4 | 18.7 | 17.5 |
| | 49.6 | 0.9 | 40.8 | 44.9 | 44.4 | 52.6 | 40.2 | 42.5 | 23.7 | 23.0 | 19.8 |
| | 43.7 | 40.3 | 45.3 | 50.7 | 46.2 | 51.7 | 56.1 | 52.6 | 65.5 | 53.0 | 60.2 |
| | 42.2 | 36.6 | 42.5 | 46.3 | 46.3 | 52.5 | 51.4 | 52.0 | 63.2 | 60.8 | 48.3 |
| | 35.5 | 36.7 | 45.9 | 43.8 | 48.3 | 51.3 | 52.4 | 57.6 | 65.4 | 60.3 | 59.1 |
| | 30.5 | 34.1 | 38.0 | 43.9 | 42.5 | 47.5 | 54.5 | 48.6 | 59.9 | 52.5 | 57.5 |
| Mean | 44.8 | 1.0 | 40.8 | 48.7 | 46.4 | 50.8 | 41.4 | 42.8 | 27.6 | 21.1 | 16.6 |
| Std Dev | 4.1 | 0.1 | 3.0 | 4.8 | 1.5 | 2.2 | 1.3 | 2.5 | 2.7 | 3.6 | 3.0 |
| SEM | 2.0 | 0.1 | 1.5 | 2.4 | 0.8 | 1.1 | 0.6 | 1.3 | 1.3 | 1.8 | 1.5 |
| CV% | 9.1 | 13.3 | 7.5 | 9.9 | 3.3 | 4.3 | 3.1 | 5.9 | 9.7 | 16.8 | 18.0 |
| Relative Trar | 100 | 2.2 | 91.2 | 108.9 | 103.7 | 113.6 | 92.6 | 95.6 | 61.7 | 47.2 | 37.0 |
| Mean | 37.9 | 36.9 | 42.9 | 46.2 | 45.9 | 50.8 | 53.6 | 55.2 | 63.5 | 59.1 | 56.4 |
| Std Dev | 6.1 | 2.5 | 3.6 | 3.2 | 2.4 | 2.2 | 2.1 | 6.2 | 2.6 | 4.2 | 5.9 |
| SEM | 3.1 | 1.3 | 1.8 | 1.6 | 1.2 | 1.1 | 1.0 | 3.1 | 1.3 | 2.1 | 2.7 |
| CV% | 16.2 | 6.9 | 8.4 | 7.0 | 5.2 | 4.4 | 3.9 | 11.2 | 4.1 | 7.1 | 9.7 |
| Relative Trar | 100 | 97.3 | 113.1 | 121.6 | 120.9 | 133.8 | 141.3 | 145.5 | 167.4 | 155.8 | 148.5 |

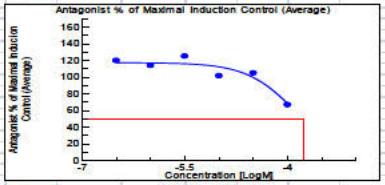



Viability (% Control)

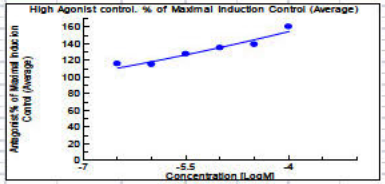
| Octylsalicylate ant | 10nM DHT | neg. cont | Induced | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 103 | 100 | 97 | 96 | 104 | 96 | 97 | 97 | 88 | 70 | 66 |
| StdDev | 3 | 4 | 6 | 5 | 9 | 2 | 5 | 5 | 7 | 5 | 5 |
| SEM | 1 | 2 | 3 | 2 | 4 | 1 | 2 | 2 | 3 | 2 | 2 |
| %CV | 2.9 | 3.9 | 6.4 | 5.1 | 8.9 | 2.1 | 5.1 | 5.1 | 8.3 | 7.0 | 7.3 |

Fit >-4
Chart #Ok




0 Bottom
117.9 Top
-3.9 EC50
-1.2 Hill slope

Fit <-6.5
Chart #Ok




0 Bottom
1255.5 Top
9.2 EC50
0.1 Hill slope

# Data Spreadsheets

| | | | | |
|---|---|---|---|---|
| Experiment date: | 20Oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: | 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry | |
| 11/11/11 13:23 | | Study Number: | 9070-100107ARTA | |
| Assay Conducted by: | [redacted] | Compound | Octylsalicylate | |

| Octylsalicylate | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 552400 | 9500 | 6050 | 9150 | 5350 | 8300 | 7250 | 10150 | 6350 | 7050 | 4900 | |
| B | 200 | 517450 | 9050 | 7800 | 9400 | 7800 | 9500 | 7500 | 12500 | 8650 | 4650 | 3900 | |
| C | 50 | 535000 | 7750 | 9700 | 9650 | 8950 | 10150 | 11600 | 10050 | 7700 | 6200 | 5150 | |
| D | 100 | 587350 | 9550 | 8850 | 10400 | 10950 | 11050 | 9100 | 10300 | 9350 | 7150 | 4300 | |
| E | 0 | 638050 | 8550 | 9900 | 9300 | 8250 | 10350 | 9400 | 11700 | 7050 | 5300 | 5200 | |
| F | 50 | 579500 | 9400 | 9250 | 13800 | 9850 | 10650 | 12100 | 10800 | 7550 | 7150 | 5200 | |
| G | 0 | 216650 | 15500 | 13200 | 74000 | 48750 | 19600 | 38150 | 26200 | 41300 | 16750 | 10650 | with 10µM Nilutamide |
| H | 0 | 212550 | 13050 | 16400 | 16850 | 15500 | 16400 | 13050 | 19000 | 22450 | 12000 | 7700 | with 10µM Nilutamide |
| Mean | 75 | 568292 | 8779 | | 10283 | 8525 | 10000 | 9492 | 10917 | 7775 | 6250 | 4775 | |
| Std Dev | 69 | 43130 | 1105 | | 1778 | 1923 | 981 | 2020 | 985 | 1082 | 1070 | 549 | |
| SEM | 28 | 17608 | 319 | | 726 | 785 | 400 | 825 | 402 | 442 | 437 | 224 | |
| CV% | 91.9 | 7.6 | 12.58 | | 17.3 | 22.6 | 9.8 | 21.3 | 9.0 | 13.9 | 17.1 | 11.5 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 214600 | 14538 | | 45425 | 32125 | 18000 | 25600 | 22600 | 31875 | 14375 | 9175 | |
| Std Dev | 0 | 2899 | 1673 | | 40411 | 23511 | 2263 | 17748 | 5091 | 13329 | 3359 | 2086 | |
| Mean VC | 8779 | | Mean Nilutamide Control | | 14538 | | | | | | | | |

**Subtraction of VC from wells**

| Octylsalicylate | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 543621 | 721 | -2729 | 371 | -3429 | -479 | -1529 | 1371 | -2429 | -1729 | -3879 | |
| B | 200 | 508671 | 271 | -979 | 621 | -979 | 721 | -1279 | 3721 | -129 | -4129 | -4879 | |
| C | 50 | 526221 | -1029 | 921 | 871 | 171 | 1371 | 2821 | 1271 | -1079 | -2579 | -3629 | |
| D | 100 | 578571 | 771 | 71 | 1621 | 2171 | 2271 | 321 | 1521 | 571 | -1629 | -4479 | |
| E | 0 | 629271 | -229 | 1121 | 521 | -529 | 1571 | 621 | 2921 | -1729 | -3479 | -3579 | |
| F | 50 | 570721 | 621 | 471 | 5021 | 1071 | 1871 | 3321 | 2021 | -1229 | -1629 | -3579 | |
| G | 0 | 202113 | 963 | -1338 | 59463 | 34213 | 5063 | 23613 | 11663 | 26763 | 2213 | -3888 | with 10µM Nilutamide |
| H | 0 | 198013 | -1488 | 1863 | 2313 | 963 | 1863 | -1488 | 4463 | 7913 | -2538 | -6838 | with 10µM Nilutamide |

**Corrected Data Means**

| Octylsalicylate | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 75 | 559513 | 0 | | 1504 | -254 | 1221 | 713 | 2138 | -1004 | -2529 | -4004 |
| Std Dev | 69 | 43130 | 1105 | | 1778 | 1923 | 981 | 2020 | 985 | 1082 | 1070 | 549 |
| SEM | 28 | 17608 | 319 | | 726 | 785 | 400 | 825 | 402 | 442 | 437 | 224 |
| CV% | 91.9 | 7.7 | | | 118.2 | -756.8 | 80.3 | 283.5 | 46.1 | -107.8 | -42.3 | -13.7 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

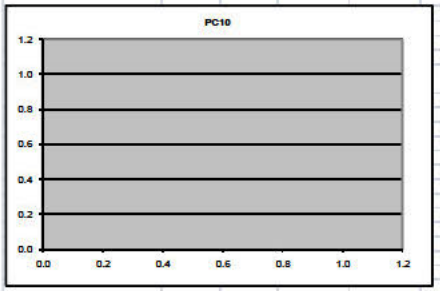
**Agonist: % of Maximal Induction Control**

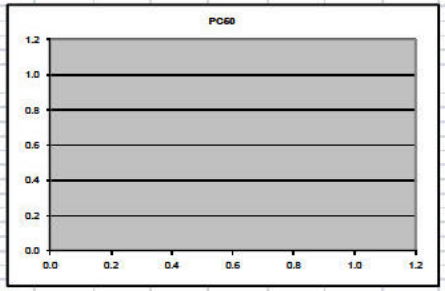
| Octylsalicylate | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 97.2 | 0.1 | -0.5 | 0.1 | -0.6 | -0.1 | -0.3 | 0.2 | -0.4 | -0.3 | -0.7 | |
| B | 0.0 | 90.9 | 0.0 | -0.2 | 0.1 | -0.2 | 0.1 | -0.2 | 0.7 | 0.0 | -0.7 | -0.9 | |
| C | 0.0 | 94.0 | -0.2 | 0.2 | 0.2 | 0.0 | 0.2 | 0.5 | 0.2 | -0.2 | -0.5 | -0.6 | |
| D | 0.0 | 103.4 | 0.1 | 0.0 | 0.3 | 0.4 | 0.4 | 0.1 | 0.3 | 0.1 | -0.3 | -0.8 | |
| E | 0.0 | 112.5 | 0.0 | 0.2 | 0.1 | -0.1 | 0.3 | 0.1 | 0.5 | -0.3 | -0.6 | -0.6 | |
| F | 0.0 | 102.0 | 0.1 | 0.1 | 0.9 | 0.2 | 0.3 | 0.6 | 0.4 | -0.2 | -0.3 | -0.6 | |
| G | 0.0 | 36.1 | 0.2 | -0.2 | 10.6 | 6.1 | 0.9 | 4.2 | 2.1 | 4.8 | 0.4 | -0.7 | with 10µM Nilutamide |
| H | 0.0 | 35.4 | -0.3 | 0.3 | 0.4 | 0.2 | 0.3 | -0.3 | 0.8 | 1.4 | -0.5 | -1.2 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Octylsalicylate | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.3 | 0.0 | 0.2 | 0.1 | 0.4 | -0.2 | -0.5 | -0.7 |
| Std Dev | 0.0 | 7.7 | 0.2 | | 0.3 | 0.3 | 0.2 | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 |
| SEM | 0.0 | 3.1 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |

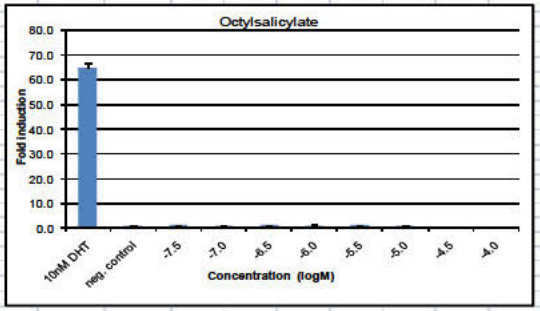
PC10 [ ] [ ] PC50 [ ] [ ]

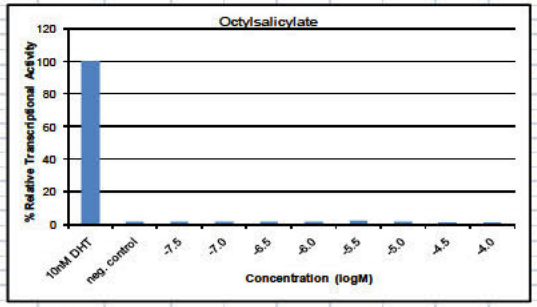



**FOLD INDUCTION**

| | 10nM DH | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 62.9 | 1.1 | 0.7 | 1.0 | 0.6 | 0.9 | 0.8 | 1.2 | 0.7 | 0.8 | 0.6 |
| | 58.9 | 1.0 | 0.9 | 1.1 | 0.9 | 1.1 | 0.9 | 1.4 | 1.0 | 0.5 | 0.4 |
| | 60.9 | 0.9 | 1.1 | 1.1 | 1.0 | 1.2 | 1.3 | 1.1 | 0.9 | 0.7 | 0.6 |
| | 66.9 | 1.1 | 1.0 | 1.2 | 1.2 | 1.3 | 1.0 | 1.2 | 1.1 | 0.8 | 0.5 |
| | 72.7 | 1.0 | 1.1 | 1.1 | 0.9 | 1.2 | 1.1 | 1.3 | 0.8 | 0.6 | 0.6 |
| | 66.0 | 1.1 | 1.1 | 1.6 | 1.1 | 1.2 | 1.4 | 1.2 | 0.9 | 0.8 | 0.6 |
| Mean | 64.7 | 1.0 | | 1.2 | 1.0 | 1.1 | 1.1 | 1.2 | 0.9 | 0.7 | 0.5 |
| Std Dev | 4.9 | 0.1 | | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |
| SEM | 2.0 | 0.0 | | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 |
| CV% | 7.6 | 12.6 | | 17.3 | 22.6 | 9.8 | 21.3 | 9.0 | 13.9 | 17.1 | 11.5 |
| Relative Tran | 100 | 1.5 | | 1.8 | 1.5 | 1.8 | 1.7 | 1.9 | 1.4 | 1.1 | 0.8 |

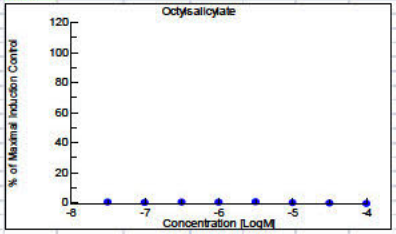



**Viability (% Control)**

| Octylsalicylate | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 98 | 100 | 100 | 99 | 97 | 98 | 97 | 92 | 88 | 87 | 84 |
| StdDev | 8 | 8 | 7 | 7 | 9 | 8 | 5 | 6 | 6 | 9 | 4 |
| SEM | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 4 | 2 |
| %CV | 8.3 | 7.9 | 7.3 | 7.5 | 9.4 | 7.7 | 5.2 | 6.2 | 7.4 | 10.2 | 5.0 |

Fit #interse
Chart #Ok




0 Bottom
0.0 Top
######## EC50
######## Hill slope

# Data Spreadsheets

| | |
|---|---|
| Experiment date: | 20Oct2011 |
| TopCount Model 89912V. Serial# 408672 | |
| 11/11/11 13:23 | |
| Assay Conducted by: | [redacted] |

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Octylsalicylate

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Octylsalicylate | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 440550 | 9700 | 425350 | 483550 | 429700 | 519500 | 344100 | 558250 | 442550 | 455550 | 386800 | with 1nM DHT |
| B | 50 | 500050 | 9150 | 394250 | 380400 | 374850 | 414950 | 399700 | 489100 | 508550 | 509950 | 430000 | with 1nM DHT |
| C | 0 | 438500 | 6000 | 343100 | 404100 | 381500 | 427500 | 398150 | 529200 | 410150 | 491050 | 35150 | with 1nM DHT |
| D | 100 | 411200 | 6900 | 337700 | 345300 | 292750 | 361150 | 322750 | 403850 | 394150 | 405450 | 304700 | with 1nM DHT |
| E | *50* | *444950* | *413600* | *378600* | *409500* | *332250* | *403850* | *402700* | *430450* | *463950* | *616650* | *658350* | with 1000nM DHT |
| F | *0* | *493600* | *487350* | *353350* | *375050* | *288150* | *361700* | *366650* | *404650* | *499350* | *536800* | *512600* | with 1000nM DHT |
| G | *0* | *480500* | *417500* | *340100* | *372900* | *361000* | *409350* | *377200* | *407100* | *473100* | *504400* | *432700* | with 1000nM DHT |
| H | *0* | *467900* | *409350* | *395200* | *403300* | *358050* | *391950* | *377550* | *467300* | *450900* | *499350* | *436250* | with 1000nM DHT |
| Mean | 50 | 447575 | 7938 | 375100 | 403338 | 369700 | 430775 | 366175 | 495100 | 438850 | 465500 | 289163 | |
| Std Dev | 41 | 37454 | 1771 | 42089 | 58677 | 56824 | 65780 | 38813 | 67115 | 50641 | 45948 | 177137 | |
| SEM | 20 | 18727 | 885 | 21045 | 29339 | 28412 | 32890 | 19407 | 33558 | 25321 | 22974 | 88568 | |
| CV% | *81.6* | *8.4* | *22.3* | *11.2* | *14.5* | *15.4* | *15.3* | *10.6* | *13.6* | *11.5* | *9.9* | *61.3* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.8 | 1.0 | 0.8 | 1.1 | 1.0 | 1.0 | 0.6 | |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 471738 | 432100 | 367313 | 390413 | 334738 | 391863 | 381075 | 432375 | 472375 | 539300 | 509975 | |
| Std Dev | 25 | 22971 | 37109 | 24418 | 18675 | 33623 | 21453 | 15293 | 38419 | 20343 | 54170 | 105703 | |
| SEM | 13 | 11486 | 18555 | 12209 | 9338 | 16812 | 10726 | 7647 | 19209 | 10171 | 27085 | 52851 | |
| CV% | *200.0* | *4.9* | *8.6* | *6.6* | *4.8* | *10.0* | *5.5* | *4.0* | *8.9* | *4.3* | *10.0* | *20.7* | |

Mean VC: 7938 — Mean DHT 1000nM Control: 432100

**Subtraction of VC from wells**

| Octylsalicylate | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -7888 | 432613 | 1763 | 417413 | 475613 | 421763 | 511563 | 336163 | 550313 | 434613 | 447613 | 378863 | with 1nM DHT |
| B | -7888 | 492113 | 1213 | 386313 | 372463 | 366913 | 407013 | 391763 | 481163 | 500613 | 502013 | 422063 | with 1nM DHT |
| C | -7938 | 430563 | -1938 | 335163 | 396163 | 373563 | 419563 | 390213 | 521263 | 402213 | 483113 | 27213 | with 1nM DHT |
| D | -7838 | 403263 | -1038 | 329763 | 337363 | 284813 | 353213 | 314813 | 395913 | 386213 | 397513 | 296763 | with 1nM DHT |
| E | -7888 | 437013 | 405863 | 370663 | 401563 | 324313 | 395913 | 394763 | 422513 | 458013 | 608713 | 650613 | with 1000nM DHT |
| F | -7938 | 485663 | 479613 | 347413 | 368013 | 280213 | 353763 | 358713 | 396713 | 491613 | 528863 | 504663 | with 1000nM DHT |
| G | -7938 | 452563 | 409563 | 332163 | 364963 | 353663 | 402013 | 369463 | 399163 | 465163 | 496463 | 424563 | with 1000nM DHT |
| H | -7938 | 479963 | 401613 | 387263 | 395363 | 349013 | 384013 | 369613 | 479363 | 442963 | 491413 | 428313 | with 1000nM DHT |

**VC Corrected Data Means** — AVG cntrl: 391768

| Octylsalicylate | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -7888 | 439638 | 0 | 367163 | 395400 | 361763 | 422838 | 358238 | 487163 | 430913 | 457563 | 281225 |
| Std Dev | 41 | 37454 | 1771 | 42089 | 58677 | 56824 | 65780 | 38813 | 67115 | 50641 | 45948 | 177137 |
| SEM | 20 | 18727 | 885 | 21045 | 29339 | 28412 | 32890 | 19407 | 33558 | 25321 | 22974 | 88568 |
| CV% | *-0.5* | *8.5* | | *11.5* | *14.8* | *15.7* | *15.6* | *10.8* | *13.8* | *11.8* | *10.0* | *63.0* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.8 | 1.0 | 0.8 | 1.1 | 1.0 | 1.0 | 0.6 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| Octylsalicylate | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.1 | 117.8 | 0.5 | 113.7 | 129.5 | 114.9 | 139.3 | 91.6 | 149.9 | 118.4 | 121.9 | 103.5 | with 1nM DHT |
| B | -2.1 | 134.0 | 0.3 | 105.2 | 101.4 | 99.9 | 110.9 | 106.7 | 131.0 | 136.3 | 136.7 | 115.0 | with 1nM DHT |
| C | -2.2 | 117.3 | -0.5 | 91.3 | 107.9 | 101.7 | 114.3 | 106.3 | 142.0 | 109.5 | 131.6 | 7.4 | with 1nM DHT |
| D | -2.1 | 109.8 | -0.3 | 89.8 | 91.9 | 77.6 | 96.2 | 85.7 | 107.8 | 105.2 | 108.3 | 80.8 | with 1nM DHT |
| E | -2.0 | 111.5 | 103.6 | 94.6 | 102.5 | 82.8 | 101.1 | 100.8 | 107.8 | 116.9 | 155.4 | 166.1 | with 1000nM DHT |
| F | -2.0 | 124.0 | 122.4 | 88.7 | 93.9 | 71.5 | 90.3 | 91.6 | 101.3 | 125.5 | 135.0 | 128.8 | with 1000nM DHT |
| G | -2.0 | 115.5 | 104.5 | 84.8 | 93.2 | 90.3 | 102.6 | 94.3 | 101.9 | 118.7 | 126.7 | 108.4 | with 1000nM DHT |
| H | -2.0 | 122.5 | 102.5 | 98.8 | 100.9 | 89.1 | 98.0 | 94.3 | 122.4 | 113.1 | 125.4 | 109.3 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Octylsalicylate | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.1 | 119.7 | 0.0 | 100.0 | 107.7 | 98.5 | 115.2 | 97.6 | 132.7 | 117.4 | 124.6 | 76.6 |
| Std Dev | 0.0 | 10.2 | 0.5 | 11.5 | 16.0 | 15.5 | 17.9 | 10.6 | 18.3 | 13.8 | 12.5 | 48.2 |
| SEM | 0.0 | 5.1 | 0.2 | 5.7 | 8.0 | 7.7 | 9.0 | 5.3 | 9.1 | 6.9 | 6.3 | 24.1 |

**High Agonist control, % of Maximal Induction Control (Average)**

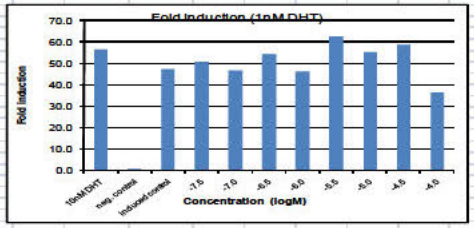
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.0 | 118.4 | 108.3 | 91.7 | 97.6 | 83.4 | 98.0 | 95.2 | 108.3 | 118.5 | 135.6 | 128.1 |
| Std Dev | 0.0 | 5.9 | 9.5 | 6.2 | 4.8 | 8.6 | 5.5 | 3.9 | 9.8 | 5.2 | 13.8 | 27.0 |
| SEM | 0.0 | 2.9 | 4.7 | 3.1 | 2.4 | 4.3 | 2.7 | 2.0 | 4.9 | 2.6 | 6.9 | 13.5 |

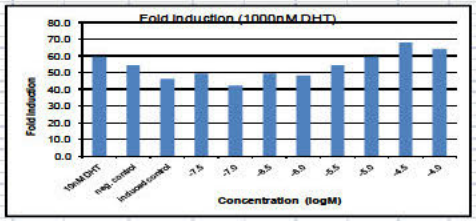
| Octylsalicylate | | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.1 | -1.4 | 108.3 | -8.3 | -10.1 | -15.1 | -17.2 | -2.3 | -24.3 | 1.2 | 11.0 | 51.6 |

| | -4.5 | -4.0 | | -4.5 | -4.0 | | Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|---|---|---|---|---|---|---|
| Differential IC30 | 11.0 | 51.6 | Differential IC60 | 11.0 | 51.6 | | 100.0 | 76.6 | 23.4 |
| | -4.3 | | | -4.0 | | | | | |

**FOLD INDUCTION**

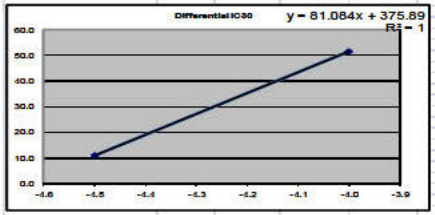
| | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 55.5 | 1.2 | 53.6 | 60.9 | 54.1 | 65.4 | 43.4 | 70.3 | 55.8 | 57.4 | 48.7 | with 1nM DHT |
| B | 63.0 | 1.2 | 49.7 | 47.9 | 47.2 | 52.3 | 50.4 | 61.6 | 64.1 | 64.2 | 54.2 | with 1nM DHT |
| C | 55.2 | 0.8 | 43.2 | 50.9 | 48.1 | 53.9 | 50.2 | 66.7 | 51.7 | 61.9 | 4.4 | with 1nM DHT |
| D | 51.8 | 0.9 | 42.5 | 43.5 | 36.9 | 45.5 | 40.7 | 50.9 | 49.7 | 51.1 | 38.4 | with 1nM DHT |
| E | 56.1 | 52.1 | 47.7 | 51.6 | 41.9 | 50.9 | 50.7 | 54.2 | 58.7 | 77.7 | 83.0 | with 1000nM DHT |
| F | 62.2 | 61.4 | 44.8 | 47.4 | 36.3 | 45.6 | 46.2 | 51.0 | 62.9 | 67.6 | 64.6 | with 1000nM DHT |
| G | 58.0 | 52.6 | 42.8 | 47.0 | 45.6 | 51.6 | 47.5 | 51.3 | 59.5 | 63.5 | 54.5 | with 1000nM DHT |
| H | 61.5 | 51.6 | 49.8 | 50.8 | 45.0 | 49.4 | 47.6 | 61.4 | 56.8 | 62.9 | 55.0 | with 1000nM DHT |
| Mean | 56.4 | 1.0 | 47.3 | 50.8 | 46.6 | 54.3 | 46.1 | 62.4 | 55.3 | 58.6 | 36.4 | Fold Induction (1nM DHT) |
| Std Dev | 4.7 | 0.2 | 5.3 | 7.4 | 7.2 | 8.3 | 4.9 | 8.5 | 6.4 | 5.8 | 22.3 | |
| SEM | 2.4 | 0.1 | 2.7 | 3.7 | 3.6 | 4.1 | 2.4 | 4.2 | 3.2 | 2.9 | 11.2 | |
| CV% | *8.4* | *22.3* | *11.2* | *14.5* | *15.4* | *15.3* | *10.6* | *13.6* | *11.5* | *9.9* | *61.3* | |
| Relative Trar | 100 | 1.8 | 83.8 | 90.1 | 82.6 | 96.2 | 81.8 | 110.6 | 98.1 | 104.0 | 64.6 | |
| Mean | 59.4 | 54.4 | 46.3 | 49.2 | 42.2 | 49.4 | 48.0 | 54.5 | 59.5 | 67.9 | 64.2 | Fold Induction (1000nM |
| Std Dev | 2.9 | 4.7 | 3.1 | 2.4 | 4.2 | 2.7 | 1.9 | 4.8 | 2.6 | 6.8 | 13.3 | |
| SEM | 1.4 | 2.3 | 1.5 | 1.2 | 2.1 | 1.4 | 1.0 | 2.4 | 1.3 | 3.4 | 6.7 | |
| CV% | *4.9* | *8.6* | *6.6* | *4.8* | *10.0* | *5.5* | *4.0* | *8.9* | *4.3* | *10.0* | *20.7* | |
| Relative Trar | 100 | 91.6 | 77.9 | 82.8 | 71.0 | 83.1 | 80.8 | 91.7 | 100.1 | 114.3 | 108.1 | |

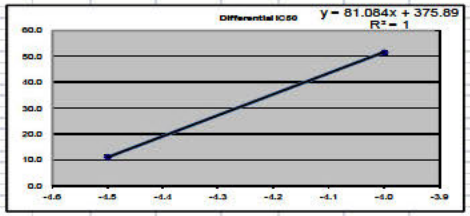


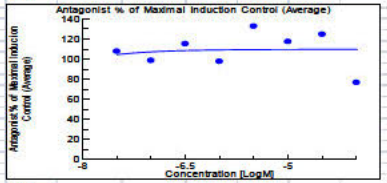

**Viability (% Control)**

| Octylsalicylate | 10nM DHT | neg. cont | induced c | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 98 | 100 | 100 | 99 | 97 | 98 | 97 | 92 | 88 | 87 | 84 |
| StdDev | 8 | 8 | 7 | 7 | 9 | 8 | 5 | 6 | 6 | 9 | 4 |
| SEM | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 4 | 2 |
| %CV | 8.3 | 7.9 | 7.3 | 7.5 | 9.4 | 7.7 | 5.2 | 6.3 | 7.4 | 10.2 | 5.0 |



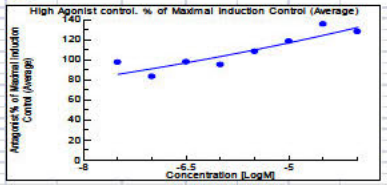




Fit: <-7.5
Chart: #Ok




0 Bottom
110.0 Top
-9.5 EC50
0.7 Hill slope

Fit: <-7.5
Chart: #Ok




0 Bottom
1189.4 Top
11.2 EC50
0.1 Hill slope

# Data Spreadsheets



| | | | |
|---|---|---|---|
| Experiment date: | 3Nov2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 13:23 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | [redacted] | Compound | Octylsalicylate |

| Octylsalicylate Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 199250 | 4450 | 2500 | 3150 | 4300 | 4650 | 3450 | 5100 | 5800 | 5350 | 3600 | |
| B | 0 | 250700 | 4250 | 4000 | 2750 | 2750 | 3400 | 3300 | 5250 | 4550 | 3350 | 3500 | |
| C | 0 | 292900 | 4400 | 3900 | 3550 | 4300 | 6050 | 4400 | 5100 | 4350 | 3350 | 3800 | |
| D | 0 | 353450 | 4650 | 4000 | 5150 | 5100 | 5100 | 4850 | 5650 | 4750 | 5050 | 3250 | |
| E | 50 | 250750 | 4700 | 4600 | 4550 | 4500 | 5600 | 4600 | 6700 | 5500 | 4400 | 4750 | |
| F | 100 | 286750 | 3600 | 2900 | 3200 | 3600 | 4300 | 2250 | 4550 | 4500 | 4300 | 4550 | |
| G | *0* | *112150* | *11500* | *10750* | *31300* | *20150* | *10300* | *11950* | *10200* | *113350* | *38100* | *8950* | with 10µM Nilutamide |
| H | *50* | *67950* | *7450* | *5150* | *7900* | *4850* | *6650* | *5900* | *8950* | *7900* | *8850* | *6050* | with 10µM Nilutamide |
| Mean | 25 | 272300 | 3996 | | 3725 | 4092 | 4850 | 3808 | 5392 | 4908 | 4300 | 3908 | |
| Std Dev | 42 | 51934 | 696 | | 927 | 814 | 950 | 988 | 732 | 596 | 834 | 604 | |
| SEM | 17 | 21202 | 201 | | 379 | 332 | 388 | 403 | 299 | 243 | 341 | 247 | |
| CV% | *167.3* | *19.1* | *17.42* | | *24.9* | *19.9* | *19.6* | *25.9* | *13.6* | *12.1* | *19.4* | *15.5* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 25 | 90050 | 8713 | | 19600 | 12500 | 8475 | 8925 | 9575 | 60625 | 23475 | 7500 | |
| Std Dev | 35 | 31254 | 2956 | | 16546 | 10819 | 2581 | 4278 | 884 | 74564 | 20683 | 2051 | |

Mean VC 3996 Mean Nilutamide Control 8713

**Subtraction of VC from wells**

| Octylsalicylate Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 195254 | 454 | -1496 | -846 | 304 | 654 | -546 | 1104 | 1804 | 1354 | -396 | |
| B | 0 | 246704 | 254 | 4 | -1246 | -1246 | -596 | -696 | 1254 | 554 | -646 | -496 | |
| C | 0 | 288904 | 404 | -96 | -446 | 304 | 2054 | 404 | 1104 | 354 | -646 | -196 | |
| D | 0 | 349454 | 654 | 4 | 1154 | 1104 | 1104 | 854 | 1654 | 754 | 1054 | -746 | |
| E | 50 | 246754 | 704 | 604 | 554 | 504 | 1604 | 604 | 2704 | 1504 | 404 | 754 | |
| F | 100 | 282754 | -396 | -1096 | -796 | -396 | 304 | -1746 | 554 | 504 | 304 | 554 | |
| G | 0 | 103438 | 2788 | 2038 | 22588 | 11438 | 1588 | 3238 | 1488 | 104638 | 29388 | 238 | with 10µM Nilutamide |
| H | 50 | 59238 | -1263 | -3563 | -813 | -3863 | -2063 | -2813 | 238 | -813 | 138 | -2663 | with 10µM Nilutamide |

**Corrected Data Means**

| Octylsalicylate Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 25 | 268304 | 0 | | -271 | 96 | 854 | -188 | 1396 | 913 | 304 | -88 |
| Std Dev | 42 | 51934 | 696 | | 927 | 814 | 950 | 988 | 732 | 596 | 834 | 604 |
| SEM | 17 | 21202 | 201 | | 379 | 332 | 388 | 403 | 299 | 243 | 341 | 247 |
| CV% | *167.3* | *19.4* | | | *-342.4* | *849.3* | *111.2* | *-526.7* | *52.4* | *65.3* | *274.3* | *-600.9* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

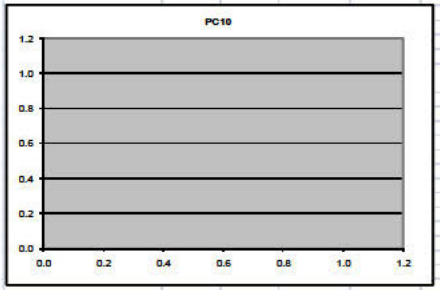
**Agonist: % of Maximal Induction Control**

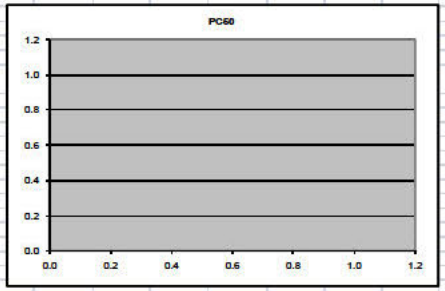
| Octylsalicylate Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 72.8 | 0.2 | -0.6 | -0.3 | 0.1 | 0.2 | -0.2 | 0.4 | 0.7 | 0.5 | -0.1 | |
| B | 0.0 | 91.9 | 0.1 | 0.0 | -0.5 | -0.5 | -0.2 | -0.3 | 0.5 | 0.2 | -0.2 | -0.2 | |
| C | 0.0 | 107.7 | 0.2 | 0.0 | -0.2 | 0.1 | 0.8 | 0.2 | 0.4 | 0.1 | -0.2 | -0.1 | |
| D | 0.0 | 130.2 | 0.2 | 0.0 | 0.4 | 0.4 | 0.4 | 0.3 | 0.6 | 0.3 | 0.4 | -0.3 | |
| E | 0.0 | 92.0 | 0.3 | 0.2 | 0.2 | 0.2 | 0.6 | 0.2 | 1.0 | 0.6 | 0.2 | 0.3 | |
| F | 0.0 | 105.4 | -0.1 | -0.4 | -0.3 | -0.1 | 0.1 | -0.7 | 0.2 | 0.2 | 0.1 | 0.2 | |
| G | 0.0 | 38.6 | 1.0 | 0.8 | 8.4 | 4.3 | 0.6 | 1.2 | 0.6 | 39.0 | 11.0 | 0.1 | with 10µM Nilutamide |
| H | 0.0 | 22.1 | -0.5 | -1.3 | -0.3 | -1.4 | -0.8 | -1.0 | 0.1 | -0.3 | 0.1 | -1.0 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Octylsalicylate Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | -0.1 | 0.0 | 0.3 | -0.1 | 0.5 | 0.3 | 0.1 | 0.0 |
| Std Dev | 0.0 | 19.4 | 0.3 | | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.2 | 0.3 | 0.2 |
| SEM | 0.0 | 7.9 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 |

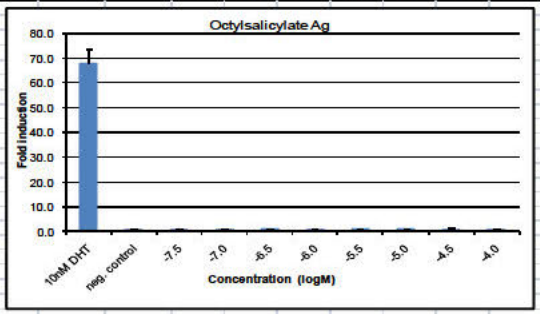
PC10 [ ] [ ] PC50 [ ] [ ]

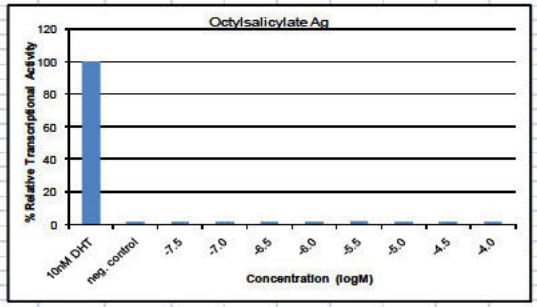



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 49.9 | 1.1 | 0.6 | 0.8 | 1.1 | 1.2 | 0.9 | 1.3 | 1.5 | 1.3 | 0.9 |
| | 62.7 | 1.1 | 1.0 | 0.7 | 0.7 | 0.9 | 0.8 | 1.3 | 1.1 | 0.8 | 0.9 |
| | 73.3 | 1.1 | 1.0 | 0.9 | 1.1 | 1.5 | 1.1 | 1.3 | 1.1 | 0.8 | 1.0 |
| | 88.5 | 1.2 | 1.0 | 1.3 | 1.3 | 1.3 | 1.2 | 1.4 | 1.2 | 1.3 | 0.8 |
| | 62.8 | 1.2 | 1.2 | 1.1 | 1.1 | 1.4 | 1.2 | 1.7 | 1.4 | 1.1 | 1.2 |
| | 71.8 | 0.9 | 0.7 | 0.8 | 0.9 | 1.1 | 0.6 | 1.1 | 1.1 | 1.1 | 1.1 |
| Mean | 68.1 | 1.0 | | 0.9 | 1.0 | 1.2 | 1.0 | 1.3 | 1.2 | 1.1 | 1.0 |
| Std Dev | 13.0 | 0.2 | | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 |
| SEM | 5.3 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| CV% | *19.1* | *17.4* | | *24.9* | *19.9* | *19.6* | *25.9* | *13.6* | *12.1* | *19.4* | *15.5* |
| Relative Tran | 100 | 1.5 | | 1.4 | 1.5 | 1.8 | 1.4 | 2.0 | 1.8 | 1.6 | 1.4 |

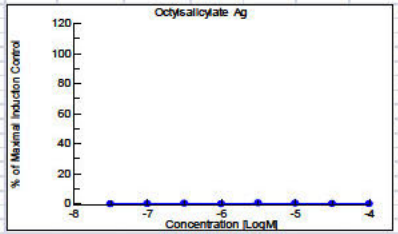



**Viability (% Control)**

| Octylsalicylate Ag | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 90 | 100 | 101 | 109 | 109 | 113 | 112 | 104 | 110 | 112 | 88 |
| StdDev | 4 | 4 | 3 | 7 | 4 | 3 | 6 | 6 | 7 | 7 | 9 |
| SEM | 2 | 2 | 1 | 3 | 2 | 1 | 2 | 3 | 3 | 3 | 4 |
| %CV | 4.3 | 4.4 | 3.4 | 6.6 | 3.6 | 2.9 | 5.1 | 6.1 | 6.1 | 6.3 | 9.8 |

Fit #intersect
Chart #Ok




0 Bottom
0.1 Top
-88.8 EC50
272.2 Hill slope

# Data Spreadsheets

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Experiment date: | 3Nov2011 | | | | blank = no cells, vehicle control | | | | Spreadsheet locked on: 11/10/2011 | | | | |
| TopCount Model B9912V, Serial# 408672 | | | | | neg. control = cells + vehicle. | | | | Green shaded areas unlocked cells for data entry | | | | |
| 11/11/11 13:23 | | | | | Study Number: | 9070-100107ARTA | | | | | | | |
| Assay Conducted by: | [redacted] | | | | Compound | Octylsalicylate | | | | | | | |

| Octylsalicylate Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 222350 | 3400 | 118700 | 156250 | 131300 | 119100 | 106550 | 171400 | 208900 | 163750 | 104300 | with 1nM DHT |
| B | 50 | 262450 | 3500 | 153850 | 154150 | 187700 | 170350 | 186250 | 232500 | 185000 | 187700 | 151400 | with 1nM DHT |
| C | 50 | 3100 | 4050 | 170350 | 185750 | 206400 | 211200 | 215100 | 258300 | 236950 | 244550 | 125500 | with 1nM DHT |
| D | 0 | 203750 | 2950 | 182450 | 182500 | 168800 | 216400 | 233750 | 209250 | 190900 | 167850 | 189300 | with 1nM DHT |
| E | *0* | *233650* | *198100* | *210650* | *222700* | *209700* | *262050* | *238100* | *316300* | *269250* | *340950* | *358750* | with 1000nM DHT |
| F | *0* | *225000* | *180000* | *197700* | *224300* | *217800* | *245350* | *206450* | *238900* | *220450* | *268000* | *282100* | with 1000nM DHT |
| G | *0* | *245200* | *225400* | *196050* | *182400* | *233750* | *165300* | *216650* | *280700* | *241250* | *325500* | *333700* | with 1000nM DHT |
| H | *50* | *209300* | *177200* | *145200* | *176100* | *136900* | *184600* | *161300* | *178900* | *177350* | *180850* | *223600* | with 1000nM DHT |
| Mean | 25 | 172913 | 3475 | 156338 | 169663 | 173550 | 179263 | 185413 | 217963 | 205438 | 190963 | 142625 | Fold Induction (1nM DH |
| Std Dev | 29 | 115828 | 452 | 27695 | 16774 | 32078 | 45086 | 56089 | 36942 | 23339 | 37224 | 36595 | |
| SEM | 14 | 57914 | 226 | 13847 | 8387 | 16039 | 22543 | 28044 | 18471 | 11669 | 18612 | 18298 | |
| CV% | *115.5* | *67.0* | *13.0* | *17.7* | *9.9* | *18.5* | *25.2* | *30.3* | *16.9* | *11.4* | *19.5* | *25.7* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 | 1.3 | 1.2 | 1.1 | 0.8 | |
| Rows E-H | | | | | | | | | | | | | Fold Induction (1000nM |
| Mean | 13 | 228250 | 195175 | 187900 | 201375 | 199538 | 214375 | 206375 | 253750 | 227075 | 278775 | 299838 | |
| Std Dev | 25 | 15067 | 22177 | 29097 | 25685 | 42937 | 46674 | 32734 | 59124 | 38713 | 72557 | 60570 | |
| SEM | 13 | 7534 | 11089 | 14549 | 12843 | 21468 | 23337 | 16367 | 29562 | 19357 | 36279 | 30285 | |
| CV% | *200.0* | *6.6* | *11.4* | *15.5* | *12.8* | *21.5* | *21.8* | *15.9* | *23.3* | *17.0* | *26.0* | *20.2* | |

| FOLD INDUCTION | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10nM DH | neg. control | induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
| 64.0 | 1.0 | 34.2 | 45.0 | 37.8 | 34.3 | 30.7 | 49.3 | 60.1 | 47.1 | 30.0 | with 1nM DHT |
| 75.5 | 1.0 | 44.3 | 44.4 | 54.0 | 49.0 | 53.6 | 67.0 | 53.2 | 54.0 | 43.6 | with 1nM DHT |
| 0.9 | 1.2 | 49.0 | 53.5 | 59.4 | 60.8 | 61.9 | 74.3 | 68.2 | 70.4 | 36.1 | with 1nM DHT |
| 58.6 | 0.8 | 52.5 | 52.5 | 48.6 | 62.3 | 67.3 | 60.2 | 54.9 | 48.3 | 54.5 | with 1nM DHT |
| 67.2 | 57.0 | 60.6 | 64.1 | 60.3 | 75.4 | 68.5 | 91.1 | 77.5 | 98.1 | 103.2 | with 1000nM DHT |
| 64.7 | 51.8 | 56.9 | 64.5 | 62.7 | 70.6 | 59.4 | 68.7 | 63.4 | 77.1 | 81.2 | with 1000nM DHT |
| 70.5 | 64.9 | 57.0 | 52.5 | 67.3 | 53.3 | 63.2 | 80.8 | 69.4 | 93.7 | 96.6 | with 1000nM DHT |
| 60.2 | 51.0 | 41.8 | 50.7 | 39.4 | 47.4 | 46.4 | 51.5 | 51.0 | 52.0 | 64.1 | with 1000nM DHT |
| 49.8 | 1.0 | 45.0 | 48.8 | 49.9 | 51.6 | 53.4 | 62.7 | 59.1 | 55.0 | 41.0 | Mean |
| 33.3 | 0.1 | 8.0 | 4.8 | 9.2 | 13.0 | 16.1 | 10.6 | 6.7 | 10.7 | 10.5 | Std Dev |
| 16.7 | 0.1 | 4.0 | 2.4 | 4.6 | 6.5 | 8.1 | 5.3 | 3.4 | 5.4 | 5.3 | SEM |
| *67.0* | *13.0* | *17.7* | *9.9* | *15.3* | *25.2* | *30.3* | *16.9* | *11.4* | *19.5* | *25.7* | CV% |
| 100 | 2.0 | 90.4 | 98.1 | 100.4 | 103.7 | 107.2 | 126.1 | 118.8 | 110.4 | 82.5 | Relative Trar |
| 65.7 | 56.2 | 54.1 | 57.9 | 57.4 | 61.7 | 59.4 | 73.0 | 65.3 | 80.2 | 86.3 | Mean |
| 4.3 | 6.4 | 8.4 | 7.4 | 12.4 | 13.4 | 9.4 | 17.0 | 11.1 | 20.9 | 17.4 | Std Dev |
| 2.2 | 3.2 | 4.2 | 3.7 | 6.2 | 6.7 | 4.7 | 8.5 | 5.6 | 10.4 | 8.7 | SEM |
| *6.6* | *11.4* | *15.5* | *12.8* | *21.5* | *21.8* | *15.9* | *23.3* | *17.0* | *26.0* | *20.2* | CV% |
| 100 | 85.5 | 82.3 | 88.2 | 87.4 | 93.9 | 90.4 | 111.2 | 99.5 | 122.1 | 131.4 | Relative Trar |

Mean VC 3475 Mean DHT 1000nM Control 195175

**Subtraction of VC from wells**

| Octylsalicylate Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -3475 | 218875 | -75 | 115225 | 152775 | 127825 | 116625 | 103075 | 167925 | 205425 | 160275 | 100825 | with 1nM DHT |
| B | -3425 | 258975 | 25 | 150375 | 150675 | 184225 | 166875 | 182775 | 229425 | 181525 | 184225 | 147925 | with 1nM DHT |
| C | -3425 | -375 | 575 | 166875 | 182275 | 202925 | 207725 | 211625 | 254825 | 233475 | 241075 | 122025 | with 1nM DHT |
| D | -3475 | 200275 | -525 | 178975 | 179025 | 165325 | 212925 | 230275 | 205775 | 187425 | 164375 | 185825 | with 1nM DHT |
| E | -3475 | 230175 | 194625 | 207175 | 219225 | 206225 | 268575 | 234625 | 313025 | 265775 | 337475 | 365275 | with 1000nM DHT |
| F | -3475 | 221525 | 176625 | 194225 | 220825 | 214325 | 241875 | 202975 | 235425 | 216975 | 264525 | 278625 | with 1000nM DHT |
| G | -3475 | 241575 | 221925 | 194575 | 178925 | 230275 | 181825 | 216175 | 277225 | 237775 | 322025 | 332225 | with 1000nM DHT |
| H | -3425 | 205825 | 173725 | 141725 | 172625 | 133425 | 161325 | 157825 | 175425 | 173875 | 177175 | 219325 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 188063

| Octylsalicylate Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -3450 | 169438 | 0 | 152863 | 166188 | 170075 | 175788 | 181938 | 214488 | 201963 | 187488 | 139150 |
| Std Dev | 29 | 115828 | 452 | 27695 | 16774 | 32078 | 45086 | 56089 | 36942 | 23339 | 37224 | 36595 |
| SEM | 14 | 57914 | 226 | 13847 | 8387 | 16039 | 22543 | 28044 | 18471 | 11669 | 18612 | 18298 |
| CV% | *-0.5* | *68.4* | | *18.1* | *10.1* | *18.9* | *25.6* | *30.8* | *17.2* | *11.6* | *19.9* | *26.3* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 | 1.3 | 1.2 | 1.1 | 0.8 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))**

| Octylsalicylate Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.3 | 143.2 | 0.0 | 75.4 | 99.9 | 83.6 | 75.6 | 67.4 | 109.9 | 134.4 | 104.8 | 66.0 | with 1nM DHT |
| B | -2.2 | 169.4 | 0.0 | 98.4 | 98.6 | 120.5 | 109.2 | 119.6 | 150.1 | 118.8 | 120.5 | 96.8 | with 1nM DHT |
| C | -2.2 | -0.2 | 0.4 | 109.2 | 119.2 | 132.8 | 135.9 | 138.4 | 166.7 | 152.7 | 157.7 | 79.8 | with 1nM DHT |
| D | -2.3 | 131.0 | -0.3 | 117.1 | 117.1 | 108.2 | 139.3 | 150.6 | 134.6 | 122.6 | 107.5 | 121.6 | with 1nM DHT |
| E | -1.8 | 122.4 | 103.5 | 110.2 | 116.6 | 109.7 | 137.5 | 124.8 | 166.4 | 141.3 | 179.4 | 188.9 | with 1000nM DHT |
| F | -1.8 | 117.8 | 93.9 | 103.3 | 117.4 | 114.0 | 128.6 | 107.9 | 125.2 | 115.4 | 140.7 | 148.2 | with 1000nM DHT |
| G | -1.8 | 128.5 | 118.0 | 103.5 | 95.1 | 122.4 | 96.7 | 114.9 | 147.4 | 126.4 | 171.2 | 176.7 | with 1000nM DHT |
| H | -1.8 | 109.4 | 92.4 | 75.4 | 91.8 | 70.9 | 85.8 | 83.9 | 93.3 | 92.5 | 94.2 | 116.6 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

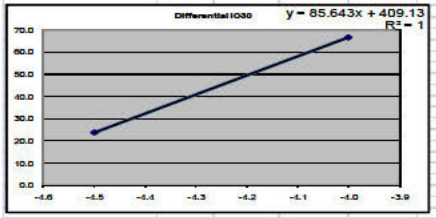
| Octylsalicylate Antag | blank | 10nM DHT | neg. control | induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.3 | 110.8 | 0.0 | 100.0 | 108.7 | 111.3 | 115.0 | 119.0 | 140.3 | 132.1 | 122.7 | 91.0 |
| Std Dev | 0.0 | 75.8 | 0.3 | 18.1 | 11.0 | 21.0 | 29.5 | 36.7 | 24.2 | 15.3 | 24.4 | 23.9 |
| SEM | 0.0 | 37.9 | 0.1 | 9.1 | 5.5 | 10.5 | 14.7 | 18.3 | 12.1 | 7.6 | 12.2 | 12.0 |

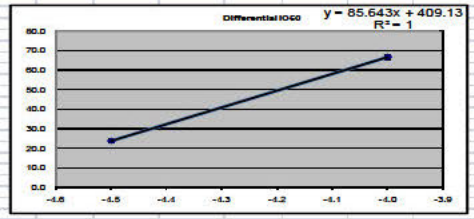
**High Agonist control, % of Maximal Induction Control (Average)**

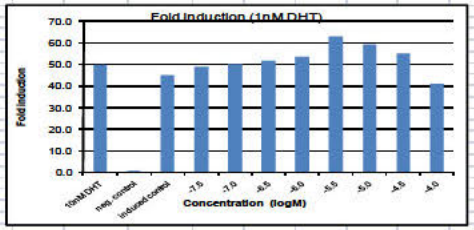
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.8 | 119.5 | 101.9 | 98.1 | 105.2 | 104.3 | 112.1 | 107.9 | 133.1 | 118.9 | 146.4 | 157.6 |
| Std Dev | 0.0 | 8.0 | 11.8 | 15.5 | 13.7 | 22.8 | 24.8 | 17.4 | 31.4 | 20.6 | 38.6 | 32.2 |
| SEM | 0.0 | 4.0 | 5.9 | 7.7 | 6.8 | 11.4 | 12.4 | 8.7 | 15.7 | 10.3 | 19.3 | 16.1 |

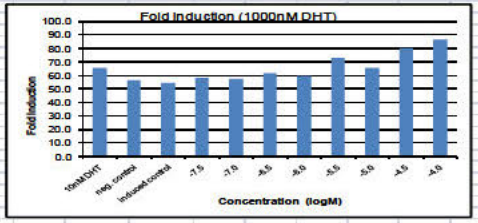
| Octylsalicylate Antag | | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.4 | 8.7 | 101.9 | -1.9 | -3.5 | -7.0 | -2.9 | -11.1 | -7.2 | -13.2 | 23.7 | 66.6 |

| | -4.5 | -4.0 | | | -4.5 | -4.0 | | Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Differential IC30 | 23.7 | 66.6 | Differential IC50 | | 23.7 | 66.6 | | 100.0 | 91.0 | 9.0 |
| | -4.4 | | | | -4.3 | | | | | |



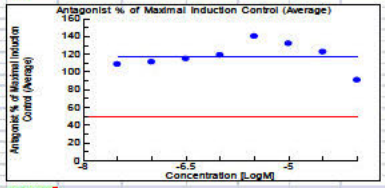




**Viability (% Control)**

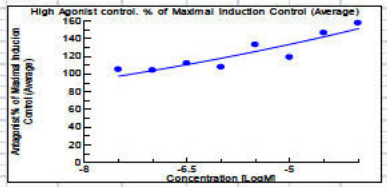
| Octylsalicylate Anta | 10nM DHT | neg. con | Induced ( | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 90 | 100 | 101 | 109 | 109 | 113 | 112 | 104 | 110 | 112 | 88 |
| StdDev | 4 | 4 | 3 | 7 | 4 | 3 | 6 | 6 | 7 | 7 | 9 |
| SEM | 2 | 2 | 1 | 3 | 2 | 1 | 3 | 3 | 3 | 3 | 4 |
| %CV | 4.3 | 4.4 | 3.4 | 6.6 | 3.6 | 2.9 | 5.1 | 6.1 | 6.1 | 6.3 | 9.8 |

Fit Chart >-4 #Ok




0 Bottom
117.5 Top
######## EC50
######## Hill slope

Fit Chart <-7.5 #Ok




0 Bottom
2126.7 Top
15.4 EC50
0.1 Hill slope

# Data Spreadsheets

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Experiment date: | 13oct2011 | | | | blank = no cells, vehicle control | | | | Spreadsheet locked on: 11/10/2011 | | | | |
| TopCount Model B9912V, Serial# 408672 | | | | | neg. control = cells + vehicle. | | | | Green shaded areas unlocked cells for data entry | | | | |
| 11/11/11 13:23 | | | | | Study Number: | 9070-100107 | | | | | | | |
| Assay Conducted by: | [redacted] | | | | Compound | Octorylene | | | | | | | |

| Octorylene ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 944350 | 23900 | 26200 | 29200 | 26650 | 15350 | 10700 | 7200 | 2100 | 2300 | 1900 | |
| B | 100 | 964000 | 21200 | 20400 | 26750 | 29300 | 14900 | 9400 | 7300 | 2450 | 1800 | 1550 | |
| C | 0 | 1305350 | 25850 | 23500 | 34000 | 37300 | 22300 | 10100 | 7700 | 2500 | 1600 | 1900 | |
| D | 0 | 1219500 | 24250 | 27000 | 30350 | 39850 | 22600 | 11300 | 8000 | 3200 | 1550 | 2150 | |
| E | 0 | 1318350 | 27300 | 24050 | 31400 | 36000 | 19750 | 14450 | 9950 | 3350 | 1750 | 2200 | |
| F | 0 | 1181250 | 24250 | 28500 | 31350 | 44200 | 22300 | 11200 | 6700 | 2200 | 1800 | 2350 | |
| G | *0* | *605700* | *41950* | *38250* | *114400* | *84400* | *37400* | *46400* | *12350* | *2600* | *1700* | *1750* | with 10µM Nilutamide |
| H | *0* | *403750* | *26950* | *34550* | *36300* | *36900* | *31950* | *26700* | *4050* | *3600* | *2000* | *2650* | with 10µM Nilutamide |
| Mean | 17 | 1155467 | 24700 | | 30508 | 35550 | 19533 | 11192 | 7808 | 2633 | 1800 | 2008 | |
| Std Dev | 41 | 164311 | 2407 | | 2431 | 6555 | 3570 | 1748 | 1139 | 521 | 266 | 285 | |
| SEM | 17 | 67080 | 695 | | 993 | 2676 | 1457 | 713 | 465 | 213 | 109 | 116 | |
| CV% | *244.9* | *14.2* | *9.74* | | *8.0* | *18.4* | *18.3* | *15.0* | *14.6* | *19.8* | *14.8* | *14.2* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 504725 | 35425 | | 75350 | 60650 | 34675 | 36550 | 8200 | 3100 | 1850 | 2200 | |
| Std Dev | 0 | 142800 | 6407 | | 55225 | 33588 | 3854 | 13930 | 5869 | 707 | 212 | 636 | |

Mean VC 24700 Mean Nilutamide Control 35425

**Subtraction of VC from wells**

| Octorylene ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 919650 | -800 | 1500 | 4500 | 1950 | -9350 | -14000 | -17500 | -22600 | -22400 | -22800 | |
| B | 100 | 939300 | -3500 | -4300 | 2050 | 4600 | -9800 | -15300 | -17400 | -22250 | -22900 | -23150 | |
| C | 0 | 1280650 | 1150 | -1200 | 9300 | 12600 | -2400 | -14600 | -17000 | -22200 | -23100 | -22800 | |
| D | 0 | 1194800 | -450 | 2300 | 5650 | 15150 | -2100 | -13400 | -16700 | -21500 | -23150 | -22550 | |
| E | 0 | 1293650 | 2600 | -650 | 6700 | 11300 | -4950 | -10250 | -14750 | -21350 | -22950 | -22500 | |
| F | 0 | 1156550 | -450 | 3800 | 6650 | 19500 | -2400 | -13500 | -18000 | -22500 | -22900 | -22350 | |
| G | 0 | 570275 | 6525 | 2825 | 78975 | 48975 | 1975 | 10975 | -23075 | -32825 | -33725 | -33675 | with 10µM Nilutamide |
| H | 0 | 368325 | -8475 | -875 | 875 | 1475 | -3475 | -8725 | -31375 | -31825 | -33425 | -32775 | with 10µM Nilutamide |

**Corrected Data Means**

| Octorylene ag | blank | 10nM DHT | neg. control | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 17 | 1130767 | 0 | | 5808 | 10850 | -5167 | -13508 | -16892 | -22067 | -22900 | -22692 |
| Std Dev | 41 | 164311 | 2407 | | 2431 | 6555 | 3570 | 1748 | 1139 | 521 | 266 | 285 |
| SEM | 17 | 67080 | 695 | | 993 | 2676 | 1457 | 713 | 465 | 213 | 109 | 116 |
| CV% | *244.9* | *14.5* | | | *41.9* | *60.4* | *-69.1* | *-12.9* | *-6.7* | *-2.4* | *-1.2* | *-1.3* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

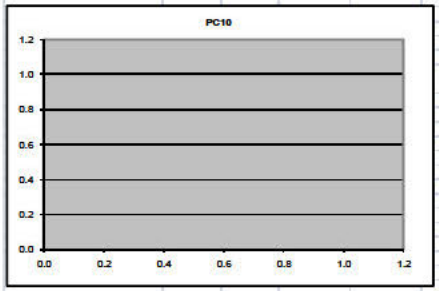
**Agonist: % of Maximal Induction Control**

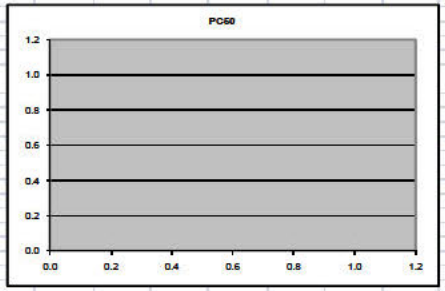
| Octorylene ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 81.3 | -0.1 | 0.1 | 0.4 | 0.2 | -0.8 | -1.2 | -1.5 | -2.0 | -2.0 | -2.0 | |
| B | 0.0 | 83.1 | -0.3 | -0.4 | 0.2 | 0.4 | -0.9 | -1.4 | -1.5 | -2.0 | -2.0 | -2.0 | |
| C | 0.0 | 113.3 | 0.1 | -0.1 | 0.8 | 1.1 | -0.2 | -1.3 | -1.5 | -2.0 | -2.0 | -2.0 | |
| D | 0.0 | 105.7 | 0.0 | 0.2 | 0.5 | 1.3 | -0.2 | -1.2 | -1.5 | -1.9 | -2.0 | -2.0 | |
| E | 0.0 | 114.4 | 0.2 | -0.1 | 0.6 | 1.0 | -0.4 | -0.9 | -1.3 | -1.9 | -2.0 | -2.0 | |
| F | 0.0 | 102.3 | 0.0 | 0.3 | 0.6 | 1.7 | -0.2 | -1.2 | -1.6 | -2.0 | -2.0 | -2.0 | |
| G | 0.0 | 50.4 | 0.6 | 0.2 | 7.0 | 4.3 | 0.2 | 1.0 | -2.0 | -2.9 | -3.0 | -3.0 | with 10µM Nilutamide |
| H | 0.0 | 32.6 | -0.7 | -0.1 | 0.1 | 0.1 | -0.3 | -0.8 | -2.8 | -2.8 | -3.0 | -2.9 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Octorylene ag | blank | 10nM DHT | neg. control | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.5 | 1.0 | -0.5 | -1.2 | | | | |
| Std Dev | 0.0 | 14.5 | 0.2 | | 0.2 | 0.6 | 0.3 | 0.2 | | | | |
| SEM | 0.0 | 5.9 | 0.1 | | 0.1 | 0.2 | 0.1 | 0.1 | | | | |

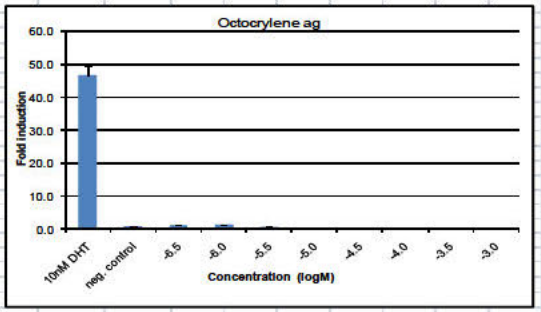
PC10 [ ] [ ] PC50 [ ] [ ]

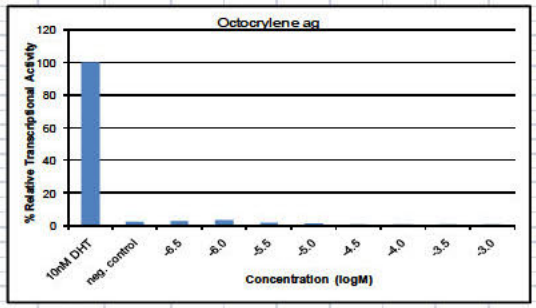



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 38.2 | 1.0 | 1.1 | 1.2 | 1.1 | 0.6 | 0.4 | 0.3 | 0.1 | 0.1 | 0.1 |
| | 39.0 | 0.9 | 0.8 | 1.1 | 1.2 | 0.6 | 0.4 | 0.3 | 0.1 | 0.1 | 0.1 |
| | 52.8 | 1.0 | 1.0 | 1.4 | 1.5 | 0.9 | 0.4 | 0.3 | 0.1 | 0.1 | 0.1 |
| | 49.4 | 1.0 | 1.1 | 1.2 | 1.6 | 0.9 | 0.5 | 0.3 | 0.1 | 0.1 | 0.1 |
| | 53.4 | 1.1 | 1.0 | 1.3 | 1.5 | 0.8 | 0.6 | 0.4 | 0.1 | 0.1 | 0.1 |
| | 47.8 | 1.0 | 1.2 | 1.3 | 1.8 | 0.9 | 0.5 | 0.3 | 0.1 | 0.1 | 0.1 |
| Mean | 46.8 | 1.0 | | 1.2 | 1.4 | 0.8 | 0.5 | 0.3 | 0.1 | 0.1 | 0.1 |
| Std Dev | 6.7 | 0.1 | | 0.1 | 0.3 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| SEM | 2.7 | 0.0 | | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CV% | *14.2* | *9.7* | | *8.0* | *18.4* | *18.3* | *15.6* | *14.6* | *19.8* | *14.8* | *14.2* |
| Relative Tran | 100 | 2.1 | | 2.6 | 3.1 | 1.7 | 1.0 | 0.7 | 0.2 | 0.2 | 0.2 |

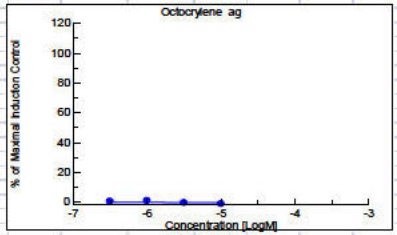



**Viability (% Control)**

| Octorylene ag | 10nM DHT | neg. cont | neg. cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 105 | 100 | 103 | 105 | 106 | 102 | 95 | 74 | 59 | 49 | 60 |
| StdDev | 5 | 1 | 7 | 5 | 4 | 6 | 5 | 2 | 4 | 6 | 6 |
| SEM | 2 | 1 | 3 | 2 | 2 | 3 | 2 | 1 | 2 | 2 | 3 |
| %CV | 5.0 | 1.3 | 6.4 | 4.9 | 4.2 | 6.3 | 5.5 | 2.1 | 6.8 | 12.3 | 10.5 |

Fit #intersect
Chart #Ok




0 Bottom
0.2 Top
-5.8 EC50
-128.8 Hill slope

# Data Spreadsheets

Experiment date: 13Oct2011
TopCount Model 89912V. Serial# 408672
11/11/11 13:23
Assay Conducted by:

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Octocrylene

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Octocrylene ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1224400 | 28150 | 934150 | 1174400 | 878400 | 927600 | 617050 | 144900 | 6950 | 5550 | 8150 | with 1nM DHT |
| B | 0 | 1103950 | 21900 | 892250 | 1131300 | 1069650 | 889600 | 484650 | 158900 | 8500 | 4550 | 7150 | with 1nM DHT |
| C | 150 | 1079450 | 22650 | 861200 | 1140250 | 1054200 | 1179250 | 615800 | 124500 | 8450 | 5100 | 6100 | with 1nM DHT |
| D | 50 | 1135050 | 23800 | 929300 | 1240550 | 1024250 | 944050 | 537350 | 185400 | 11150 | 4550 | 8900 | with 1nM DHT |
| E | 50 | 1121050 | 1066750 | 1062050 | 1049900 | 1135000 | 1478500 | 1163150 | 333700 | 33350 | 17100 | 46800 | with 1000nM DHT |
| F | 50 | 1200950 | 997150 | 1093600 | 1354500 | 1322350 | 1439100 | 1337350 | 371350 | 37300 | 16600 | 49650 | with 1000nM DHT |
| G | 50 | 921250 | 943150 | 1203650 | 1217500 | 1339850 | 1406350 | 1269800 | 727200 | 44300 | 20650 | 46650 | with 1000nM DHT |
| H | 0 | 979500 | 894600 | 993050 | 1024450 | 1341300 | 1195650 | 1169000 | 463400 | 43750 | 21100 | 57950 | with 1000nM DHT |
| Mean | 63 | 1135713 | 24125 | 904225 | 1171625 | 1006625 | 985125 | 563713 | 153425 | 8763 | 4938 | 7575 | Fold Induction (1nM DHT) |
| Std Dev | 63 | 63351 | 2795 | 34248 | 49561 | 87536 | 131410 | 64560 | 25572 | 1747 | 484 | 1217 | |
| SEM | 31 | 31676 | 1397 | 17124 | 24780 | 43768 | 65705 | 32280 | 12786 | 873 | 242 | 608 | |
| CV% | 100.7 | 5.6 | 11.6 | 3.8 | 4.2 | 8.7 | 13.3 | 11.5 | 16.7 | 19.9 | 9.8 | 16.1 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 1.0 | 0.9 | 0.9 | 0.5 | 0.1 | 0.0 | 0.0 | 0.0 | Fold Induction (1000nM DHT) |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 38 | 1055688 | 972913 | 1120488 | 1161588 | 1259625 | 1376150 | 1240325 | 579413 | 39675 | 18963 | 50363 | |
| Std Dev | 25 | 128129 | 73091 | 111226 | 154512 | 100046 | 123687 | 78673 | 109434 | 5280 | 2329 | 5256 | |
| SEM | 13 | 64065 | 36545 | 55613 | 77256 | 50023 | 61843 | 39336 | 54717 | 2640 | 1165 | 2628 | |
| CV% | 66.7 | 12.1 | 7.5 | 9.9 | 13.3 | 7.9 | 9.0 | 6.3 | 18.9 | 13.3 | 12.3 | 10.4 | |

Mean VC: 24125 Mean DHT 1000nM Control: 972913

**Subtraction of VC from wells**

| Octocrylene ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -24075 | 1200275 | 4025 | 910025 | 1150275 | 854275 | 903475 | 592925 | 120775 | -17175 | -18575 | -15975 | with 1nM DHT |
| B | -24125 | 1079825 | -2225 | 868125 | 1107175 | 1045525 | 865475 | 460525 | 134775 | -15625 | -19575 | -16975 | with 1nM DHT |
| C | -23975 | 1055325 | -1475 | 837075 | 1116125 | 1030075 | 1156125 | 591675 | 100375 | -15675 | -19025 | -18025 | with 1nM DHT |
| D | -24075 | 1110925 | -325 | 905175 | 1216425 | 1000125 | 919925 | 513225 | 161275 | -12975 | -19575 | -15225 | with 1nM DHT |
| E | -24075 | 1096925 | 1042625 | 1037925 | 1025775 | 1110875 | 1454375 | 1141025 | 531575 | 9225 | -7025 | 22675 | with 1000nM DHT |
| F | -24075 | 1176825 | 963025 | 1198875 | 1330375 | 1198225 | 1396975 | 1313225 | 547225 | 13175 | -7325 | 25725 | with 1000nM DHT |
| G | -24075 | 897125 | 919025 | 1179725 | 1193375 | 1315725 | 1382225 | 1245675 | 703075 | 20175 | -3275 | 22725 | with 1000nM DHT |
| H | -24125 | 955375 | 870475 | 968925 | 1000325 | 1317175 | 1171525 | 1164875 | 439275 | 19625 | -3025 | 33825 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl: 1022575

| Octocrylene ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -24063 | 1111588 | 0 | 880100 | 1147500 | 982500 | 961000 | 539588 | 129300 | -15363 | -19188 | -16550 |
| Std Dev | 63 | 63351 | 2795 | 34248 | 49561 | 87536 | 131410 | 64560 | 25572 | 1747 | 484 | 1217 |
| SEM | 31 | 31676 | 1397 | 17124 | 24780 | 43768 | 65705 | 32280 | 12786 | 873 | 242 | 608 |
| CV% | -0.3 | 5.7 | | 3.9 | 4.3 | 8.9 | 13.7 | 12.0 | 19.8 | -11.4 | -2.5 | -7.4 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 1.0 | 0.9 | 0.9 | 0.5 | 0.1 | 0.0 | 0.0 | 0.0 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| Octocrylene ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.7 | 136.4 | 0.5 | 103.4 | 130.7 | 97.1 | 102.7 | 67.4 | 13.7 | -2.0 | -2.1 | -1.8 | with 1nM DHT |
| B | -2.7 | 122.7 | -0.3 | 98.6 | 125.8 | 118.8 | 98.3 | 52.3 | 15.3 | -1.8 | -2.2 | -1.9 | with 1nM DHT |
| C | -2.7 | 119.9 | -0.2 | 95.1 | 126.8 | 117.0 | 131.2 | 67.2 | 11.4 | -1.8 | -2.2 | -2.0 | with 1nM DHT |
| D | -2.7 | 126.2 | 0.0 | 102.8 | 138.2 | 113.6 | 104.5 | 58.3 | 18.3 | -1.5 | -2.2 | -1.7 | with 1nM DHT |
| E | -2.4 | 107.3 | 102.0 | 101.5 | 100.3 | 108.6 | 142.2 | 111.6 | 52.0 | 0.9 | -0.7 | 2.2 | with 1000nM DHT |
| F | -2.4 | 115.1 | 94.2 | 117.2 | 130.1 | 117.2 | 136.5 | 128.4 | 53.5 | 1.3 | -0.7 | 2.5 | with 1000nM DHT |
| G | -2.4 | 87.7 | 89.9 | 115.4 | 116.7 | 128.7 | 135.2 | 121.8 | 68.8 | 2.0 | -0.3 | 2.2 | with 1000nM DHT |
| H | -2.4 | 93.4 | 85.1 | 94.8 | 97.8 | 128.8 | 114.6 | 113.9 | 43.0 | 1.9 | -0.3 | 3.3 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Octocrylene ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.7 | 126.3 | 0.0 | 100.0 | 130.4 | 111.6 | 109.2 | 61.3 | | | | |
| Std Dev | 0.0 | 7.2 | 0.3 | 3.9 | 5.6 | 9.9 | 14.9 | 7.3 | | | | |
| SEM | 0.0 | 3.6 | 0.2 | 1.9 | 2.8 | 5.0 | 7.5 | 3.7 | | | | |

**High Agonist control, % of Maximal Induction Control (Average)**

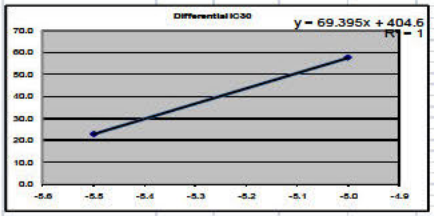
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.4 | 100.9 | 92.8 | 107.2 | 111.2 | 120.8 | 132.1 | 118.9 | | | | |
| Std Dev | 0.0 | 12.5 | 7.1 | 10.9 | 15.1 | 9.8 | 12.1 | 7.7 | | | | |
| SEM | 0.0 | 6.3 | 3.6 | 5.4 | 7.6 | 4.9 | 6.0 | 3.8 | | | | |

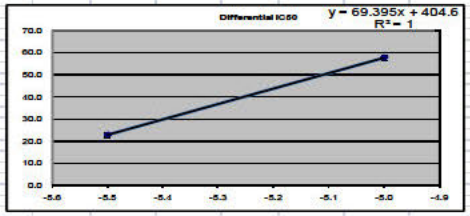
| Octocrylene ant | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|
| Differential | 0.4 | -25.4 | 92.8 | 7.2 | -19.1 | 9.2 | 22.9 | 57.6 |

| Differential IC30 | -6.5 | -6.0 |
|---|---|---|
| | 22.9 | 57.6 |
| | -5.4 | |

| Differential IC50 | -6.5 | -6.0 |
|---|---|---|
| | 22.9 | 57.6 |
| | -5.1 | |

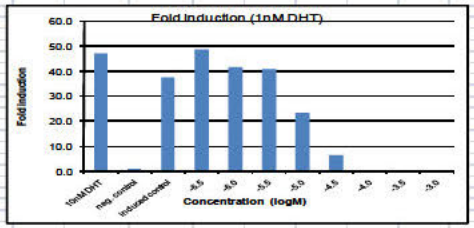
| Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|
| 100.0 | 61.3 | 38.7 |

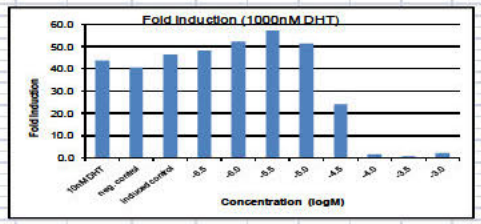



**FOLD INDUCTION**

| | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 50.8 | 1.2 | 38.7 | 48.7 | 36.4 | 38.4 | 25.6 | 6.0 | 0.3 | 0.3 | 0.3 | with 1nM DHT |
| | 45.8 | 0.9 | 37.0 | 46.9 | 44.3 | 36.9 | 20.1 | 5.6 | 0.4 | 0.2 | 0.3 | with 1nM DHT |
| | 44.7 | 0.9 | 35.7 | 47.3 | 43.7 | 48.9 | 25.5 | 5.2 | 0.4 | 0.2 | 0.3 | with 1nM DHT |
| | 47.0 | 1.0 | 38.5 | 51.4 | 42.5 | 39.1 | 22.3 | 7.7 | 0.5 | 0.2 | 0.4 | with 1nM DHT |
| | 46.5 | 44.2 | 44.0 | 43.5 | 47.0 | 61.3 | 48.3 | 23.0 | 1.4 | 0.7 | 1.9 | with 1000nM DHT |
| | 49.8 | 40.9 | 50.7 | 56.1 | 50.7 | 58.9 | 55.4 | 23.7 | 1.5 | 0.7 | 2.1 | with 1000nM DHT |
| | 38.2 | 39.1 | 49.9 | 50.5 | 55.5 | 58.3 | 52.6 | 30.1 | 1.8 | 0.9 | 1.9 | with 1000nM DHT |
| | 40.6 | 37.1 | 41.2 | 42.5 | 55.6 | 49.6 | 49.3 | 19.2 | 1.8 | 0.9 | 2.4 | with 1000nM DHT |
| Mean | 47.1 | 1.0 | 37.5 | 48.6 | 41.7 | 40.8 | 23.4 | 6.4 | 0.4 | 0.2 | 0.3 | |
| Std Dev | 2.6 | 0.1 | 1.4 | 2.1 | 3.6 | 5.4 | 2.7 | 1.1 | 0.1 | 0.0 | 0.1 | |
| SEM | 1.3 | 0.1 | 0.7 | 1.0 | 1.8 | 2.7 | 1.3 | 0.5 | 0.0 | 0.0 | 0.0 | |
| CV% | 5.6 | 11.6 | 3.8 | 4.2 | 8.7 | 13.3 | 11.5 | 16.7 | 19.9 | 9.8 | 16.1 | |
| Relative Tran | 100 | 2.1 | 79.6 | 103.2 | 88.6 | 86.7 | 49.6 | 13.5 | 0.8 | 0.4 | 0.7 | |
| Mean | 43.8 | 40.3 | 46.4 | 48.1 | 52.2 | 57.0 | 51.4 | 24.0 | 1.6 | 0.8 | 2.1 | |
| Std Dev | 5.3 | 3.0 | 4.6 | 6.4 | 4.1 | 5.1 | 3.3 | 4.5 | 0.2 | 0.1 | 0.2 | |
| SEM | 2.7 | 1.5 | 2.3 | 3.2 | 2.1 | 2.6 | 1.6 | 2.3 | 0.1 | 0.0 | 0.1 | |
| CV% | 12.1 | 7.5 | 9.9 | 13.3 | 7.9 | 9.0 | 6.3 | 16.9 | 13.3 | 12.3 | 10.4 | |
| Relative Tran | 100 | 92.2 | 106.1 | 110.0 | 119.3 | 130.3 | 117.5 | 54.9 | 3.8 | 1.8 | 4.8 | |

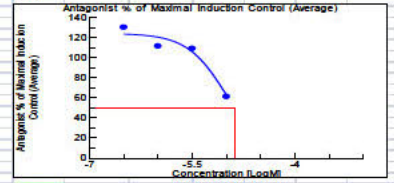



**Viability (% Control)**

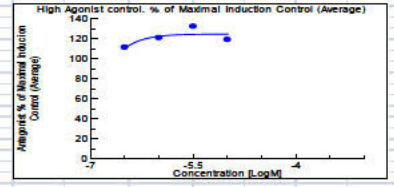
| Octocrylene ant | 10nM DHT | neg. cont | Induced | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 105 | 100 | 103 | 105 | 106 | 102 | 95 | 74 | 59 | 49 | 60 |
| StdDev | 5 | 1 | 7 | 5 | 4 | 6 | 5 | 2 | 4 | 6 | 6 |
| SEM | 2 | 1 | 3 | 2 | 2 | 3 | 2 | 1 | 2 | 2 | 3 |
| %CV | 5.0 | 1.3 | 6.4 | 4.9 | 4.2 | 6.3 | 5.5 | 2.1 | 6.8 | 12.3 | 10.5 |

Fit: >-5
Chart: #Ok




0 Bottom
124.6 Top
-5.0 EC50
-1.5 Hill slope

Fit: <-6.5
Chart: #Ok




0 Bottom
124.9 Top
-7.0 EC50
1.7 Hill slope

# Data Spreadsheets



| | | | |
|---|---|---|---|
| Experiment date: | 20Oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 13:23 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | [redacted] | Compound | Octocrylene |

| Octocrylene | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 642800 | 16150 | 12700 | 13750 | 11800 | 12800 | 11200 | 10100 | 6750 | 1950 | 200 | |
| B | 50 | 685850 | 13900 | 10750 | 11600 | 13550 | 13750 | 11200 | 10100 | 6250 | 1100 | 450 | |
| C | 0 | 691950 | 13200 | 14150 | 14200 | 11450 | 16500 | 12050 | 10900 | 7250 | 2100 | 350 | |
| D | 50 | 628800 | 14350 | 15050 | 14150 | 16750 | 17200 | 11200 | 14150 | 6700 | 1500 | 850 | |
| E | 50 | 681050 | 14450 | 12100 | 13950 | 16150 | 18000 | 13600 | 11300 | 5450 | 1150 | 400 | |
| F | 0 | 705100 | 15300 | 13400 | 14500 | 13800 | 16050 | 11100 | 9950 | 6350 | 1700 | 400 | |
| G | *50* | *362350* | *89800* | *91850* | *100750* | *72500* | *110100* | *108400* | *118400* | *48050* | *500* | *1050* | with 10µM Nilutamide |
| H | *0* | *246800* | *20000* | *18150* | *18250* | *19850* | *18600* | *24000* | *21350* | *16100* | *300* | *400* | with 10µM Nilutamide |
| Mean | 25 | 672592 | 13792 | | 13692 | 13917 | 15717 | 11725 | 11083 | 6458 | 1583 | 442 | |
| Std Dev | 27 | 29947 | 1481 | | 1055 | 2178 | 2026 | 984 | 1594 | 607 | 411 | 218 | |
| SEM | 11 | 12226 | 427 | | 431 | 889 | 827 | 402 | 651 | 248 | 168 | 89 | |
| CV% | *100.5* | *4.5* | *10.74* | | *7.7* | *15.7* | *12.9* | *8.4* | *14.4* | *9.4* | *25.9* | *40.3* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 25 | 304575 | 54950 | | 59500 | 46175 | 64350 | 66200 | 69875 | 32075 | 400 | 725 | |
| Std Dev | 35 | 81706 | 41440 | | 58336 | 37229 | 64700 | 59680 | 68625 | 22592 | 141 | 460 | |

Mean VC 13792 Mean Nilutamide Control 54950

**Subtraction of VC from wells**

| Octocrylene | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 629008 | 2358 | -1092 | -42 | -1992 | -992 | -2592 | -3692 | -7042 | -11842 | -13592 | |
| B | 50 | 672058 | 108 | -3042 | -2192 | -242 | -42 | -2592 | -3692 | -7542 | -12692 | -13342 | |
| C | 0 | 678158 | -592 | 358 | 408 | -2342 | 2708 | -1742 | -2892 | -6542 | -11692 | -13442 | |
| D | 50 | 615008 | 558 | 1258 | 358 | 2958 | 3408 | -2592 | 358 | -7092 | -12292 | -12942 | |
| E | 50 | 667258 | 658 | -1692 | 158 | 2358 | 4208 | -192 | -2492 | -8342 | -12642 | -13392 | |
| F | 0 | 691308 | 1508 | -392 | 708 | 8 | 2258 | -2692 | -3842 | -7442 | -12092 | -13392 | |
| G | 50 | 307400 | 34850 | 36900 | 45800 | 17550 | 55150 | 53450 | 63450 | -6900 | -54450 | -53900 | with 10µM Nilutamide |
| H | 0 | 191850 | -34950 | -36800 | -36700 | -35100 | -36350 | -30950 | -33600 | -38850 | -54650 | -54550 | with 10µM Nilutamide |

**Corrected Data Means**

| Octocrylene | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 25 | 658800 | 0 | | -100 | 125 | 1925 | -2067 | -2708 | -7333 | -12208 | -13350 |
| Std Dev | 27 | 29947 | 1481 | | 1055 | 2178 | 2026 | 984 | 1594 | 607 | 411 | 218 |
| SEM | 11 | 12226 | 427 | | 431 | 889 | 827 | 402 | 651 | 248 | 168 | 89 |
| CV% | *100.5* | *4.5* | | | *-1055.2* | *1742.8* | *105.2* | *-47.6* | *-58.9* | *-8.3* | *-3.4* | *-1.6* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

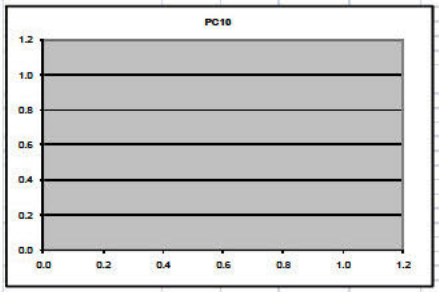
**Agonist: % of Maximal Induction Control**

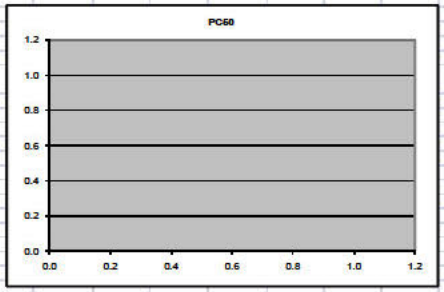
| Octocrylene | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 95.5 | 0.4 | -0.2 | 0.0 | -0.3 | -0.2 | -0.4 | -0.6 | -1.1 | -1.8 | -2.1 | |
| B | 0.0 | 102.0 | 0.0 | -0.5 | -0.3 | 0.0 | 0.0 | -0.4 | -0.6 | -1.1 | -1.9 | -2.0 | |
| C | 0.0 | 102.9 | -0.1 | 0.1 | 0.1 | -0.4 | 0.4 | -0.3 | -0.4 | -1.0 | -1.8 | -2.0 | |
| D | 0.0 | 93.4 | 0.1 | 0.2 | 0.1 | 0.4 | 0.5 | -0.4 | 0.1 | -1.1 | -1.9 | -2.0 | |
| E | 0.0 | 101.3 | 0.1 | -0.3 | 0.0 | 0.4 | 0.6 | 0.0 | -0.4 | -1.3 | -1.9 | -2.0 | |
| F | 0.0 | 104.9 | 0.2 | -0.1 | 0.1 | 0.0 | 0.3 | -0.4 | -0.6 | -1.1 | -1.8 | -2.0 | |
| G | 0.0 | 46.7 | 5.3 | 5.6 | 7.0 | 2.7 | 8.4 | 8.1 | 9.6 | -1.0 | -8.3 | -8.2 | with 10µM Nilutamide |
| H | 0.0 | 29.1 | -5.3 | -5.6 | -5.6 | -5.3 | -5.5 | -4.7 | -5.1 | -5.9 | -8.3 | -8.3 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Octocrylene | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.0 | 0.0 | 0.3 | -0.3 | -0.4 | -1.1 | | |
| Std Dev | 0.0 | 4.5 | 0.2 | | 0.2 | 0.3 | 0.3 | 0.1 | 0.2 | 0.1 | | |
| SEM | 0.0 | 1.9 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | | |

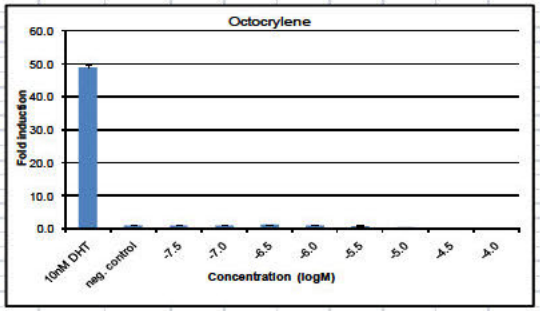
PC10 PC50

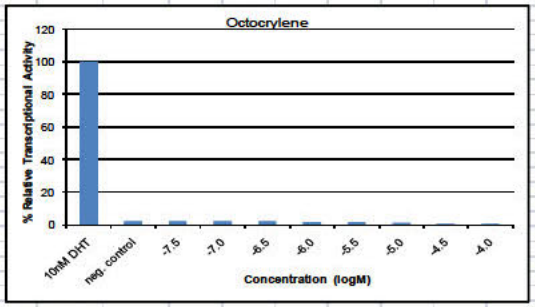



**FOLD INDUCTION**

| 10nM DH | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 46.6 | 1.2 | 0.9 | 1.0 | 0.9 | 0.9 | 0.8 | 0.7 | 0.5 | 0.1 | 0.0 | |
| 49.7 | 1.0 | 0.8 | 0.8 | 1.0 | 1.0 | 0.8 | 0.7 | 0.5 | 0.1 | 0.0 | |
| 50.2 | 1.0 | 1.0 | 1.0 | 0.8 | 1.2 | 0.9 | 0.8 | 0.5 | 0.2 | 0.0 | |
| 45.6 | 1.0 | 1.1 | 1.0 | 1.2 | 1.2 | 0.8 | 1.0 | 0.5 | 0.1 | 0.1 | |
| 49.4 | 1.0 | 0.9 | 1.0 | 1.2 | 1.3 | 1.0 | 0.8 | 0.4 | 0.1 | 0.0 | |
| 51.1 | 1.1 | 1.0 | 1.1 | 1.0 | 1.2 | 0.8 | 0.7 | 0.5 | 0.1 | 0.0 | |
| 48.8 | 1.0 | | 1.0 | 1.0 | 1.1 | 0.9 | 0.8 | 0.5 | 0.1 | 0.0 | Mean |
| 2.2 | 0.1 | | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | Std Dev |
| 0.9 | 0.0 | | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | SEM |
| *4.5* | *10.7* | | *7.7* | *15.7* | *12.9* | *8.4* | *14.4* | *9.4* | *25.9* | *49.3* | CV% |
| 100 | 2.1 | | 2.0 | 2.1 | 2.3 | 1.7 | 1.6 | 1.0 | 0.2 | 0.1 | Relative Tran |

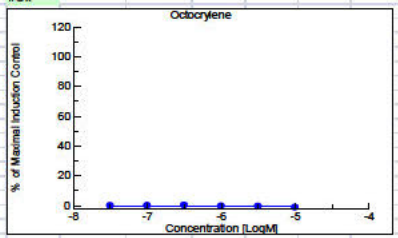



**Viability (% Control)**

| Octocrylene | 10nM DHT | neg. cont | neg. cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 96 | 100 | 106 | 104 | 104 | 103 | 101 | 97 | 94 | 67 | 55 |
| StdDev | 5 | 5 | 5 | 3 | 5 | 6 | 6 | 3 | 4 | 3 | 2 |
| SEM | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| %CV | 5.5 | 5.4 | 4.9 | 2.9 | 4.9 | 5.6 | 5.5 | 2.8 | 3.9 | 4.5 | 3.4 |

Fit #interse
Chart ct
#Ok




0 Bottom
-0.1 Top
-8.0 EC50
-38.6 Hill slope

# Data Spreadsheets

Experiment date: 20Oct2011
TopCount Model B9912V. Serial# 408672
11/11/11 13:23
Assay Conducted by: [redacted]

blank = no cells. vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Octocrylene

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Octocrylene | blank | 10nM DHT | neg. control | induced control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 659800 | 11200 | 651900 | 577900 | 652200 | 609100 | 597950 | 596850 | 369750 | 39950 | 750 | with 1nM DHT |
| B | 100 | 654250 | 11650 | 523050 | 625450 | 664850 | 672250 | 667000 | 597900 | 421500 | 41600 | 1000 | with 1nM DHT |
| C | 100 | 510750 | 11500 | 707650 | 663000 | 663350 | 685350 | 588500 | 754650 | 404200 | 27250 | 850 | with 1nM DHT |
| D | 0 | 497650 | 10750 | 675050 | 653400 | 581500 | 794600 | 568700 | 660550 | 422900 | 28100 | 850 | with 1nM DHT |
| E | *0* | *726200* | *674350* | *647700* | *665900* | *586600* | *781200* | *691450* | *607250* | *775300* | *106050* | *2050* | with 1000nM DHT |
| F | *0* | *658350* | *621550* | *566200* | *644950* | *677750* | *662550* | *665650* | *733400* | *631250* | *103000* | *2500* | with 1000nM DHT |
| G | *0* | *621200* | *544100* | *573900* | *668950* | *576500* | *705850* | *626300* | *793600* | *726750* | *119250* | *1400* | with 1000nM DHT |
| H | *30* | *644700* | *630600* | *575850* | *512400* | *574000* | *627950* | *579050* | *666200* | *583900* | *62550* | *1900* | with 1000nM DHT |

Fold Induction (1nM DHT)

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 50 | 580613 | 11275 | 639413 | 629938 | 640475 | 690325 | 605538 | 652488 | 404588 | 34225 | 863 | |
| Std Dev | 58 | 88425 | 397 | 80876 | 38174 | 39720 | 77076 | 42749 | 74336 | 24733 | 7601 | 103 | |
| SEM | 29 | 44212 | 198 | 40438 | 19087 | 19860 | 38538 | 21375 | 37168 | 12367 | 3801 | 52 | |
| CV% | *115.5* | *15.2* | *3.5* | *12.6* | *6.1* | *6.2* | *11.2* | *7.1* | *11.4* | *6.1* | *22.2* | *12.0* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 1.1 | 1.1 | 1.1 | 1.2 | 1.0 | 1.1 | 0.7 | 0.1 | 0.0 | Fold Induction (1000nM DHT) |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 663113 | 617650 | 591913 | 623050 | 603713 | 694388 | 641113 | 755113 | 680275 | 98438 | 1963 | |
| Std Dev | 25 | 46034 | 54183 | 37367 | 74534 | 49658 | 66069 | 48826 | 63529 | 86930 | 24849 | 453 | |
| SEM | 13 | 23012 | 27092 | 18684 | 37267 | 24829 | 33035 | 24413 | 31765 | 43465 | 12424 | 227 | |
| CV% | *200.0* | *6.9* | *8.8* | *6.3* | *12.0* | *8.2* | *9.5* | *7.6* | *8.4* | *12.8* | *25.2* | *23.1* | |

Mean VC: 11275 — Mean DHT 1000nM Control: 617650

**Subtraction of VC from wells**

| Octocrylene | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -11275 | 648525 | -75 | 640625 | 566625 | 640925 | 597825 | 586675 | 585575 | 358475 | 28675 | -10525 | with 1nM DHT |
| B | -11175 | 642975 | 375 | 511775 | 614175 | 653575 | 660975 | 655725 | 586625 | 410225 | 30325 | -10275 | with 1nM DHT |
| C | -11175 | 499475 | 225 | 696375 | 651725 | 652075 | 674075 | 577225 | 743375 | 392925 | 15975 | -10425 | with 1nM DHT |
| D | -11275 | 486375 | -525 | 663775 | 642125 | 570225 | 783325 | 557425 | 649275 | 411625 | 16825 | -10425 | with 1nM DHT |
| E | -11275 | 716925 | 663075 | 636425 | 654625 | 575325 | 769925 | 680175 | 796975 | 763925 | 97675 | -9225 | with 1000nM DHT |
| F | -11275 | 647075 | 610275 | 556925 | 633675 | 666475 | 651275 | 654375 | 742125 | 619975 | 91725 | -8775 | with 1000nM DHT |
| G | -11275 | 609925 | 532825 | 564625 | 657675 | 565225 | 694575 | 617025 | 782325 | 717475 | 107975 | -9875 | with 1000nM DHT |
| H | -11225 | 633425 | 613925 | 564675 | 501125 | 562725 | 616675 | 567775 | 654925 | 574625 | 51275 | -9375 | with 1000nM DHT |

**VC Corrected Data Means** — AVG cntrl: 593504

| Octocrylene | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -11225 | 569338 | 0 | 628138 | 618663 | 629200 | 679050 | 594263 | 641213 | 393313 | 22950 | -10413 |
| Std Dev | 58 | 88425 | 397 | 80876 | 38174 | 39720 | 77076 | 42749 | 74336 | 24733 | 7601 | 103 |
| SEM | 29 | 44212 | 198 | 40438 | 19087 | 19860 | 38538 | 21375 | 37168 | 12367 | 3801 | 52 |
| CV% | *-0.5* | *15.5* | | *12.9* | *6.2* | *6.3* | *11.4* | *7.2* | *11.6* | *6.3* | *33.1* | *-1.0* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 1.1 | 1.1 | 1.1 | 1.2 | 1.0 | 1.1 | 0.7 | 0.0 | 0.0 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| Octocrylene | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -1.8 | 103.2 | 0.0 | 102.0 | 90.2 | 102.0 | 95.2 | 93.4 | 93.2 | 57.1 | 4.6 | -1.7 | with 1nM DHT |
| B | -1.8 | 102.4 | 0.1 | 81.5 | 97.8 | 104.0 | 105.2 | 104.4 | 93.4 | 65.3 | 4.8 | -1.6 | with 1nM DHT |
| C | -1.8 | 79.5 | 0.0 | 110.9 | 103.8 | 103.8 | 107.3 | 91.9 | 118.3 | 62.6 | 2.5 | -1.7 | with 1nM DHT |
| D | -1.8 | 77.4 | -0.1 | 105.7 | 102.2 | 90.8 | 124.7 | 88.7 | 103.4 | 65.5 | 2.7 | -1.7 | with 1nM DHT |
| E | -1.9 | 120.8 | 111.7 | 107.2 | 110.3 | 96.9 | 129.7 | 114.6 | 134.1 | 128.7 | 16.5 | -1.6 | with 1000nM DHT |
| F | -1.9 | 109.0 | 102.8 | 93.8 | 106.8 | 112.3 | 109.7 | 110.3 | 125.0 | 104.5 | 15.5 | -1.5 | with 1000nM DHT |
| G | -1.9 | 102.8 | 89.8 | 95.1 | 110.8 | 95.2 | 117.0 | 104.0 | 131.8 | 120.9 | 18.2 | -1.7 | with 1000nM DHT |
| H | -1.9 | 106.7 | 104.4 | 95.1 | 84.4 | 94.8 | 103.9 | 95.7 | 110.3 | 96.8 | 8.6 | -1.6 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Octocrylene | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.8 | 90.6 | 0.0 | 100.0 | 98.5 | 100.2 | 108.1 | 94.6 | 102.1 | 62.6 | | |
| Std Dev | 0.0 | 14.1 | 0.1 | 12.9 | 6.1 | 6.3 | 12.3 | 6.8 | 11.8 | 3.9 | | |
| SEM | 0.0 | 7.0 | 0.0 | 6.4 | 3.0 | 3.2 | 6.1 | 3.4 | 5.9 | 2.0 | | |

**High Agonist control, % of Maximal Induction Control (Average)**

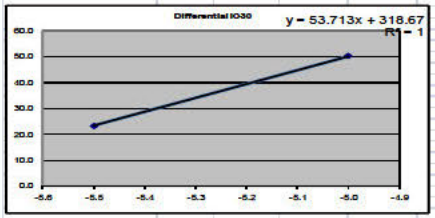
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.9 | 109.8 | 102.2 | 97.8 | 103.1 | 99.8 | 115.1 | 106.1 | 125.3 | 112.7 | | |
| Std Dev | 0.0 | 7.8 | 9.1 | 6.3 | 12.6 | 8.4 | 11.1 | 8.2 | 10.7 | 14.6 | | |
| SEM | 0.0 | 3.9 | 4.6 | 3.1 | 6.3 | 4.2 | 5.6 | 4.1 | 5.4 | 7.3 | | |

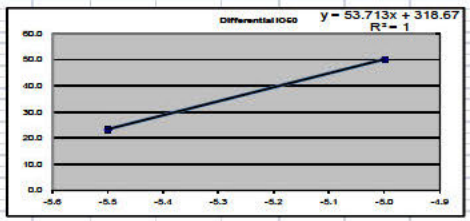
| Octocrylene | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|
| Differential | -0.1 | 19.2 | 102.2 | -2.2 | 4.6 | -0.3 | 7.0 | 11.5 | 23.2 | 50.1 | | |

| Differential IC30 | -5.5 | -5.0 |
|---|---|---|
| | 23.2 | 50.1 |
| | -5.4 | |

| Differential IC50 | -5.5 | -5.0 |
|---|---|---|
| | 23.2 | 50.1 |
| | -5.0 | |

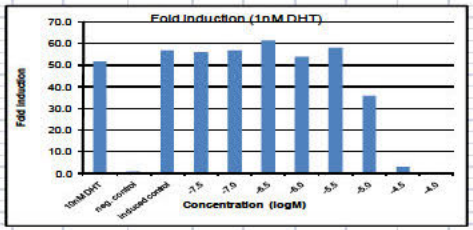
| Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|
| 100.0 | 62.6 | 37.4 |

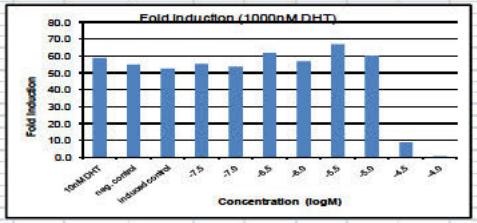



**FOLD INDUCTION**

| | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 58.5 | 1.0 | 57.8 | 51.3 | 57.8 | 54.0 | 53.0 | 52.9 | 32.8 | 3.5 | 0.1 | |
| | 58.0 | 1.0 | 46.4 | 55.5 | 59.0 | 59.6 | 59.2 | 53.0 | 37.4 | 3.7 | 0.1 | |
| | 45.3 | 1.0 | 62.8 | 58.8 | 58.8 | 60.8 | 52.2 | 66.9 | 35.8 | 2.4 | 0.1 | |
| | 44.1 | 1.0 | 59.9 | 58.0 | 51.6 | 70.5 | 50.4 | 58.6 | 37.5 | 2.5 | 0.1 | |
| | 64.6 | 59.8 | 57.4 | 59.1 | 52.0 | 69.3 | 61.3 | 71.6 | 68.8 | 9.7 | 0.2 | |
| | 58.4 | 55.1 | 50.4 | 57.2 | 60.1 | 58.8 | 59.0 | 66.8 | 56.0 | 9.1 | 0.2 | |
| | 55.1 | 48.3 | 51.1 | 59.3 | 51.1 | 62.6 | 55.7 | 70.4 | 64.6 | 10.6 | 0.1 | |
| | 57.2 | 55.9 | 51.1 | 45.4 | 50.9 | 55.7 | 51.4 | 59.1 | 52.0 | 5.5 | 0.2 | |
| Mean | 51.5 | 1.0 | 56.7 | 55.9 | 56.8 | 61.2 | 53.7 | 57.9 | 35.9 | 3.0 | 0.1 | |
| Std Dev | 7.8 | 0.0 | 7.2 | 3.4 | 3.5 | 6.8 | 3.8 | 6.6 | 2.2 | 0.7 | 0.0 | |
| SEM | 3.9 | 0.0 | 3.6 | 1.7 | 1.8 | 3.4 | 1.9 | 3.3 | 1.1 | 0.3 | 0.0 | |
| CV% | *15.2* | *3.5* | *12.6* | *6.1* | *6.2* | *11.2* | *7.1* | *11.4* | *6.1* | *22.2* | *12.0* | |
| Relative Tran | 100 | 1.9 | 110.1 | 108.5 | 110.3 | 118.9 | 104.3 | 112.4 | 69.7 | 5.9 | 0.1 | |
| Mean | 58.8 | 54.8 | 52.5 | 55.3 | 53.5 | 61.6 | 56.9 | 67.0 | 60.3 | 8.7 | 0.2 | |
| Std Dev | 4.1 | 4.8 | 3.3 | 6.5 | 4.4 | 5.9 | 4.3 | 5.8 | 7.7 | 2.2 | 0.0 | |
| SEM | 2.0 | 2.4 | 1.7 | 3.3 | 2.2 | 2.9 | 2.2 | 2.8 | 3.9 | 1.1 | 0.0 | |
| CV% | *6.9* | *8.8* | *6.3* | *12.0* | *8.2* | *9.5* | *7.6* | *8.4* | *12.8* | *25.2* | *23.1* | |
| Relative Tran | 100 | 93.1 | 89.3 | 94.0 | 91.0 | 104.7 | 96.7 | 113.9 | 102.6 | 14.8 | 0.3 | |

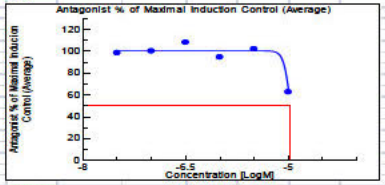



**Viability (% Control)**

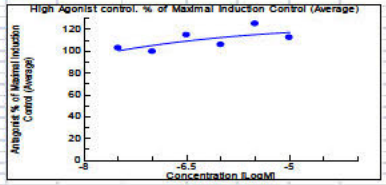
| Octocrylene | 10nM DHT | neg. cont | induced | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 96 | 100 | 106 | 104 | 104 | 103 | 101 | 97 | 94 | 67 | 95 |
| StdDev | 5 | 5 | 5 | 3 | 5 | 6 | 6 | 3 | 4 | 3 | 2 |
| SEM | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 |
| %CV | 5.5 | 5.4 | 4.9 | 2.9 | 4.9 | 5.6 | 5.5 | 2.8 | 3.9 | 4.5 | 3.4 |

Fit: >-5
Chart: #Ok




0 Bottom
100.7 Top
-5.0 EC50
-8.9 Hill slope

Fit: <-7.5
Chart: #Ok




0 Bottom
124.3 Top
-10.1 EC50
0.2 Hill slope

# Data Spreadsheets



| | | | |
|---|---|---|---|
| Experiment date: | 3Nov2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 13:23 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | [redacted] | Compound | Octocrylene |

| Octocrylene Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 238050 | 4150 | 3050 | 3900 | 4100 | 4200 | 4700 | 5000 | 3850 | 2400 | 1550 | |
| B | 0 | 252000 | 3700 | 3650 | 6550 | 4900 | 6050 | 4950 | 6600 | 5200 | 2900 | 1850 | |
| C | 50 | 288500 | 6050 | 3600 | 5900 | 5950 | 5300 | 5200 | 5750 | 4650 | 2800 | 1000 | |
| D | 100 | 272100 | 4650 | 5300 | 5700 | 5650 | 5100 | 5000 | 5700 | 4850 | 2850 | 1600 | |
| E | 0 | 307850 | 5600 | 5200 | 4500 | 6550 | 6500 | 4950 | 6700 | 5400 | 2750 | 1650 | |
| F | 0 | 286350 | 4900 | 4850 | 4900 | 4300 | 5650 | 4700 | 5650 | 4550 | 3200 | 1500 | |
| G | *0* | *146350* | *20200* | *20100* | *33000* | *36350* | *19800* | *14350* | *19300* | *34550* | *12950* | *800* | with 10µM Nilutamide |
| H | *0* | *86550* | *10500* | *10950* | *9400* | *11750* | *8550* | *0* | *12650* | *11250* | *4300* | *650* | with 10µM Nilutamide |
| Mean | 25 | 274142 | 4558 | | 5242 | 5242 | 5467 | 4917 | 5900 | 4750 | 2817 | 1525 | |
| Std Dev | 42 | 25646 | 925 | | 982 | 968 | 801 | 191 | 643 | 547 | 258 | 284 | |
| SEM | 17 | 10470 | 267 | | 401 | 395 | 327 | 78 | 262 | 223 | 105 | 116 | |
| CV% | *167.3* | *9.4* | *20.28* | | *18.7* | *18.5* | *14.7* | *3.9* | *10.9* | *11.5* | *9.2* | *18.6* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 116450 | 15438 | | 21200 | 24050 | 14175 | 7175 | 15975 | 22900 | 8625 | 725 | |
| Std Dev | 0 | 42285 | 5445 | | 16688 | 17395 | 7955 | 10147 | 4702 | 16476 | 6116 | 106 | |

Mean VC 4558 Mean Nilutamide Control 15438

**Subtraction of VC from wells**

| Octocrylene Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 233492 | -408 | -1508 | -658 | -458 | -358 | 142 | 442 | -708 | -2158 | -3008 | |
| B | 0 | 247442 | -858 | -908 | 1992 | 342 | 1492 | 392 | 2042 | 642 | -1658 | -2708 | |
| C | 50 | 283942 | 1492 | -958 | 1342 | 1392 | 742 | 642 | 1192 | 92 | -1758 | -3558 | |
| D | 100 | 267542 | 92 | 742 | 1142 | 1092 | 542 | 442 | 1142 | 292 | -1708 | -2958 | |
| E | 0 | 303292 | 1042 | 642 | -58 | 1992 | 1942 | 392 | 2142 | 842 | -1808 | -2908 | |
| F | 0 | 281792 | 342 | 292 | 342 | -258 | 1092 | 142 | 1092 | -8 | -1358 | -3058 | |
| G | 0 | 130913 | 4763 | 4663 | 17563 | 20913 | 4363 | -1088 | 3863 | 19113 | -2488 | -14638 | with 10µM Nilutamide |
| H | 0 | 71113 | -4938 | -4488 | -6038 | -3688 | -6888 | -15438 | -2788 | -4188 | -11138 | -14788 | with 10µM Nilutamide |

**Corrected Data Means**

| Octocrylene Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 25 | 269583 | 0 | | 683 | 683 | 908 | 358 | 1342 | 192 | -1742 | -3033 |
| Std Dev | 42 | 25646 | 925 | | 982 | 968 | 801 | 191 | 643 | 547 | 258 | 284 |
| SEM | 17 | 10470 | 267 | | 401 | 395 | 327 | 78 | 262 | 223 | 105 | 116 |
| CV% | *167.3* | *9.5* | | | *143.7* | *141.7* | *88.2* | *53.4* | *47.9* | *285.3* | *-14.8* | *-9.4* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

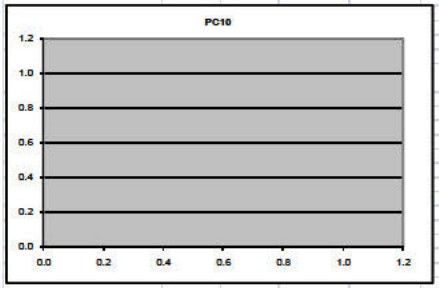
**Agonist: % of Maximal Induction Control**

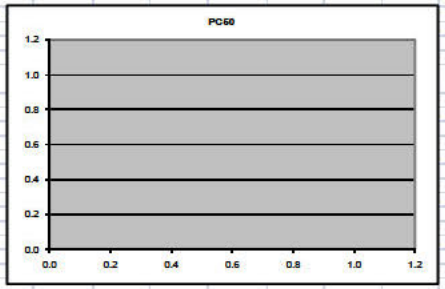
| Octocrylene Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 86.6 | -0.2 | -0.6 | -0.2 | -0.2 | -0.1 | 0.1 | 0.2 | -0.3 | -0.8 | -1.1 | |
| B | 0.0 | 91.8 | -0.3 | -0.3 | 0.7 | 0.1 | 0.6 | 0.1 | 0.8 | 0.2 | -0.6 | -1.0 | |
| C | 0.0 | 105.3 | 0.6 | -0.4 | 0.5 | 0.5 | 0.3 | 0.2 | 0.4 | 0.0 | -0.7 | -1.3 | |
| D | 0.0 | 99.2 | 0.0 | 0.3 | 0.4 | 0.4 | 0.2 | 0.2 | 0.4 | 0.1 | -0.6 | -1.1 | |
| E | 0.0 | 112.5 | 0.4 | 0.2 | 0.0 | 0.7 | 0.7 | 0.1 | 0.8 | 0.3 | -0.7 | -1.1 | |
| F | 0.0 | 104.5 | 0.1 | 0.1 | 0.1 | -0.1 | 0.4 | 0.1 | 0.4 | 0.0 | -0.5 | -1.1 | |
| G | 0.0 | 48.6 | 1.8 | 1.7 | 6.5 | 7.8 | 1.6 | -0.4 | 1.4 | 7.1 | -0.9 | -5.4 | with 10µM Nilutamide |
| H | 0.0 | 26.4 | -1.8 | -1.7 | -2.2 | -1.4 | -2.6 | -5.7 | -1.0 | -1.6 | -4.1 | -5.5 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Octocrylene Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | | 0.0 | | 0.3 | 0.3 | 0.3 | 0.1 | 0.5 | 0.1 | -0.6 | |
| Std Dev | 0.0 | | 0.3 | | 0.4 | 0.4 | 0.3 | 0.1 | 0.2 | 0.2 | 0.1 | |
| SEM | 0.0 | | 0.1 | | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | |

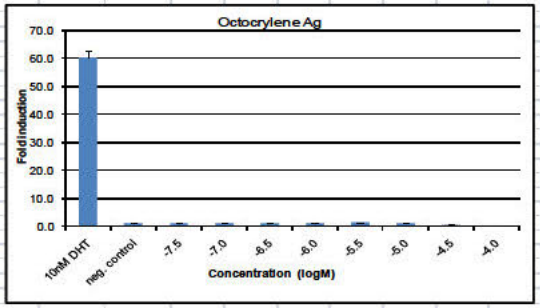
PC10 PC50

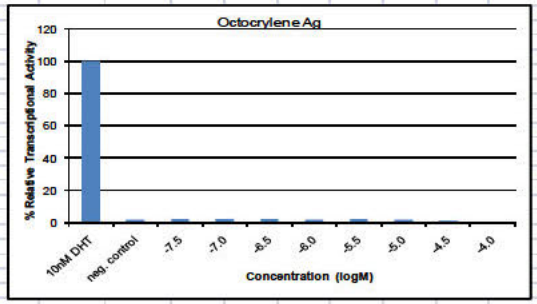



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 52.2 | 0.9 | 0.7 | 0.9 | 0.9 | 0.9 | 1.0 | 1.1 | 0.8 | 0.5 | 0.3 |
| | 55.3 | 0.8 | 0.8 | 1.4 | 1.1 | 1.3 | 1.1 | 1.4 | 1.1 | 0.6 | 0.4 |
| | 63.3 | 1.3 | 0.8 | 1.3 | 1.3 | 1.2 | 1.1 | 1.3 | 1.0 | 0.6 | 0.2 |
| | 59.7 | 1.0 | 1.2 | 1.3 | 1.2 | 1.1 | 1.1 | 1.3 | 1.1 | 0.6 | 0.4 |
| | 67.5 | 1.2 | 1.1 | 1.0 | 1.4 | 1.4 | 1.1 | 1.5 | 1.2 | 0.6 | 0.4 |
| | 62.8 | 1.1 | 1.1 | 1.1 | 0.9 | 1.2 | 1.0 | 1.2 | 1.0 | 0.7 | 0.3 |
| Mean | 60.1 | 1.0 | | 1.1 | 1.1 | 1.2 | 1.1 | 1.3 | 1.0 | 0.6 | 0.3 |
| Std Dev | 5.6 | 0.2 | | 0.2 | 0.2 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| SEM | 2.3 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| CV% | *9.4* | *20.3* | | *18.7* | *18.5* | *14.7* | *3.9* | *10.9* | *11.5* | *9.2* | *18.6* |
| Relative Tran | 100 | 1.7 | | 1.9 | 1.9 | 2.0 | 1.8 | 2.2 | 1.7 | 1.0 | 0.6 |

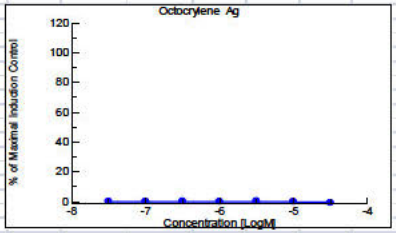



**Viability (% Control)**

| Octocrylene Ag | 10nM DHT | neg. cont | neg. cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 79 | 100 | 104 | 111 | 108 | 116 | 115 | 110 | 107 | 90 | 66 |
| StdDev | 10 | 2 | 4 | 3 | 6 | 7 | 4 | 6 | 7 | 9 | 3 |
| SEM | 4 | 1 | 2 | 1 | 2 | 3 | 2 | 2 | 3 | 4 | 1 |
| %CV | 12.9 | 1.6 | 3.9 | 3.1 | 5.1 | 6.4 | 3.8 | 5.3 | 6.2 | 9.6 | 4.8 |

Fit #interse
Chart ct
#Ok




0 Bottom
0.3 Top
-5.0 EC50
-13.9 Hill slope

# Data Spreadsheets

Experiment date: 3Nov2011
TopCount Model B9912V. Serial# 408672
11/11/11 13:23
Assay Conducted by: [redacted]

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Octocrylene

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Octocrylene Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 223650 | 3400 | 131500 | 134750 | 170350 | 158850 | 146000 | 134500 | 99700 | 29200 | 8200 | with 1nM DHT |
| B | 50 | 201950 | 2850 | 231000 | 188100 | 249450 | 217000 | 244600 | 203250 | 162350 | 47000 | 12950 | with 1nM DHT |
| C | 0 | 153950 | 3350 | 205800 | 188550 | 193900 | 245650 | 212750 | 240400 | 166750 | 42900 | 11550 | with 1nM DHT |
| D | 0 | 222950 | 4000 | 213650 | 246150 | 243100 | 295300 | 266000 | 242000 | 149550 | 60800 | 12700 | with 1nM DHT |
| E | *0* | *204150* | *216050* | *223350* | *234500* | *260450* | *337600* | *247900* | *286600* | *273000* | *221600* | *68500* | with 1000nM DHT |
| F | *0* | *177750* | *194700* | *272550* | *248550* | *245650* | *283450* | *198300* | *297000* | *297000* | *211100* | *55450* | with 1000nM DHT |
| G | *0* | *198000* | *236650* | *203650* | *259250* | *210900* | *279300* | *200200* | *297650* | *312000* | *228000* | *69900* | with 1000nM DHT |
| H | *50* | *158250* | *185700* | *205150* | *192550* | *170600* | *172550* | *173550* | *195900* | *270750* | *135550* | *43200* | with 1000nM DHT |
| Mean | 13 | 200675 | 3400 | 195488 | 189388 | 214200 | 229200 | 217338 | 205038 | 144588 | 44975 | 11350 | |
| Std Dev | 25 | 32752 | 471 | 43938 | 45496 | 38352 | 56973 | 52349 | 50317 | 30801 | 13009 | 2187 | |
| SEM | 13 | 16376 | 235 | 21969 | 22748 | 19176 | 28487 | 26175 | 25159 | 15401 | 6504 | 1093 | |
| CV% | *200.0* | *16.3* | *13.8* | *22.5* | *24.0* | *17.9* | *24.9* | *24.1* | *24.5* | *21.3* | *28.9* | *19.3* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 1.0 | 0.9 | 1.1 | 1.1 | 1.1 | 1.0 | 0.7 | 0.2 | 0.1 | Fold Induction (1000nM DHT) |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 184563 | 208775 | 226175 | 233213 | 221150 | 268325 | 204988 | 271788 | 288913 | 199113 | 59263 | |
| Std Dev | 25 | 20799 | 23048 | 32187 | 28931 | 39442 | 69170 | 31078 | 50594 | 19128 | 42946 | 12530 | |
| SEM | 13 | 10399 | 11524 | 16094 | 14465 | 19721 | 34585 | 15539 | 25297 | 9564 | 21473 | 6265 | |
| CV% | *200.0* | *11.3* | *11.0* | *14.2* | *12.4* | *17.8* | *25.8* | *15.2* | *18.6* | *6.6* | *21.6* | *21.1* | |

Mean VC: 3400 — Mean DHT 1000nM Control: 208775

**Subtraction of VC from wells**

| Octocrylene Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -3400 | 220450 | 0 | 128100 | 131350 | 166950 | 155450 | 142600 | 131100 | 96300 | 25800 | 4800 | with 1nM DHT |
| B | -3350 | 198550 | -550 | 227600 | 184700 | 246050 | 213600 | 241200 | 199850 | 158950 | 43600 | 9550 | with 1nM DHT |
| C | -3400 | 150550 | -50 | 202400 | 185150 | 190500 | 242250 | 209350 | 237000 | 163350 | 39500 | 8150 | with 1nM DHT |
| D | -3400 | 219550 | 600 | 210250 | 242750 | 239700 | 291900 | 262600 | 238600 | 146150 | 57400 | 9300 | with 1nM DHT |
| E | -3400 | 200750 | 214650 | 219950 | 231100 | 257050 | 334400 | 244500 | 293200 | 272500 | 218400 | 65100 | with 1000nM DHT |
| F | -3400 | 174350 | 191300 | 269150 | 243150 | 239250 | 280050 | 194900 | 293600 | 293600 | 207700 | 52050 | with 1000nM DHT |
| G | -3400 | 194600 | 233250 | 200250 | 255850 | 207500 | 276100 | 196800 | 294250 | 308600 | 224600 | 66500 | with 1000nM DHT |
| H | -3350 | 154950 | 182300 | 201750 | 189150 | 167200 | 169150 | 170150 | 192500 | 267350 | 132150 | 39800 | with 1000nM DHT |

**VC Corrected Data Means** — AVG cntrl: 214078

| Octocrylene Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -3388 | 197275 | 0 | 192088 | 185988 | 210800 | 225800 | 213938 | 201638 | 141188 | 41575 | 7950 |
| Std Dev | 25 | 32752 | 471 | 43938 | 45496 | 38352 | 56973 | 52349 | 50317 | 30801 | 13009 | 2187 |
| SEM | 13 | 16376 | 235 | 21969 | 22748 | 19176 | 28487 | 26175 | 25159 | 15401 | 6504 | 1093 |
| CV% | *-0.7* | *16.6* | | *22.9* | *24.5* | *18.2* | *25.2* | *24.5* | *25.0* | *21.8* | *31.3* | *27.5* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 1.0 | 0.9 | 1.1 | 1.1 | 1.1 | 1.0 | 0.7 | 0.2 | 0.0 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| Octocrylene Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -1.8 | 114.8 | 0.0 | 66.7 | 68.4 | 86.9 | 80.9 | 74.2 | 68.3 | 50.1 | 13.4 | 2.5 | with 1nM DHT |
| B | -1.7 | 103.4 | -0.3 | 118.5 | 96.2 | 128.1 | 111.2 | 125.6 | 104.0 | 82.7 | 22.7 | 5.0 | with 1nM DHT |
| C | -1.8 | 78.4 | 0.0 | 105.4 | 96.4 | 99.2 | 126.1 | 109.0 | 123.4 | 85.0 | 20.6 | 4.2 | with 1nM DHT |
| D | -1.8 | 114.3 | 0.3 | 109.5 | 126.4 | 124.8 | 152.0 | 136.7 | 124.2 | 76.1 | 29.9 | 4.8 | with 1nM DHT |
| E | -1.6 | 93.8 | 100.3 | 102.7 | 108.0 | 120.1 | 156.2 | 114.2 | 137.0 | 127.3 | 102.0 | 30.4 | with 1000nM DHT |
| F | -1.6 | 81.4 | 89.4 | 125.7 | 113.6 | 111.8 | 130.8 | 91.0 | 137.1 | 137.1 | 97.0 | 24.3 | with 1000nM DHT |
| G | -1.6 | 90.9 | 109.0 | 93.5 | 119.5 | 96.9 | 129.0 | 91.9 | 137.5 | 144.2 | 104.9 | 31.1 | with 1000nM DHT |
| H | -1.6 | 72.4 | 85.2 | 94.2 | 88.4 | 78.1 | 79.0 | 79.5 | 89.9 | 124.9 | 61.7 | 18.6 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Octocrylene Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.8 | | 0.0 | 100.0 | 96.8 | 109.7 | 117.6 | 111.4 | 105.0 | 73.5 | 21.6 | |
| Std Dev | 0.0 | | 0.2 | 22.9 | 23.7 | 20.0 | 29.7 | 27.3 | 26.2 | 16.0 | 6.8 | |
| SEM | 0.0 | | 0.1 | 11.4 | 11.8 | 10.0 | 14.8 | 13.6 | 13.1 | 8.0 | 3.4 | |

**High Agonist control, % of Maximal Induction Control (Average)**

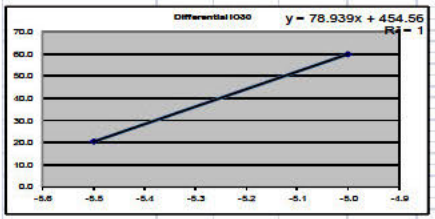
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.6 | | 95.9 | 104.1 | 107.4 | 101.7 | 123.8 | 94.2 | 125.4 | 133.4 | 91.4 | |
| Std Dev | 0.0 | | 10.8 | 15.0 | 13.5 | 18.4 | 32.3 | 14.5 | 23.6 | 8.9 | 20.1 | |
| SEM | 0.0 | | 5.4 | 7.5 | 6.8 | 9.2 | 16.2 | 7.3 | 11.8 | 4.5 | 10.0 | |

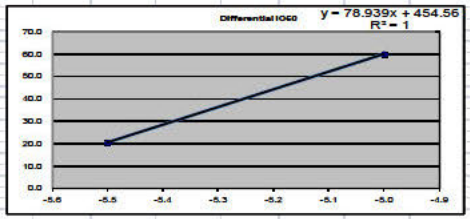
| Octocrylene Antag | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.2 | #VALUE! | 95.9 | 4.1 | 10.5 | -8.0 | 6.2 | -17.2 | 20.4 | 59.9 | 69.8 | |

| Differential IC50 | -5.5 | -6.0 |
|---|---|---|
| | 20.4 | 59.9 |
| | -5.4 | |

| Differential IC60 | -5.5 | -6.0 |
|---|---|---|
| | 20.4 | 59.9 |
| | -5.1 | |

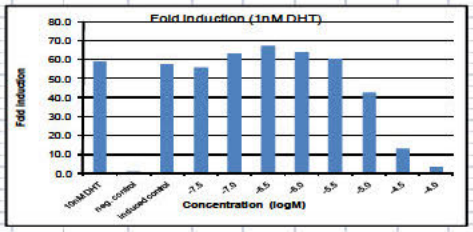
| Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|
| | 100.0 | 21.6 |

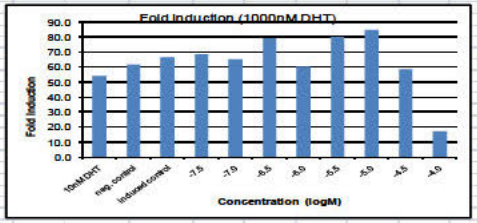



**FOLD INDUCTION**

| | 10nM DH | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 66.8 | 1.0 | 38.7 | 39.6 | 50.1 | 46.7 | 42.9 | 39.6 | 29.3 | 8.6 | 2.4 | |
| | 59.4 | 0.8 | 67.9 | 55.3 | 73.4 | 63.8 | 71.9 | 59.8 | 47.8 | 13.8 | 3.8 | |
| | 45.3 | 1.0 | 60.5 | 55.5 | 57.0 | 72.3 | 62.6 | 70.7 | 49.0 | 12.6 | 3.4 | |
| | 65.6 | 1.2 | 62.8 | 72.4 | 71.5 | 86.9 | 78.2 | 71.2 | 44.0 | 17.9 | 3.7 | |
| | 60.0 | 64.1 | 65.7 | 69.0 | 76.6 | 99.4 | 72.9 | 87.2 | 81.1 | 65.2 | 20.1 | |
| | 52.3 | 57.3 | 80.3 | 72.5 | 71.4 | 83.4 | 58.3 | 87.4 | 67.4 | 62.1 | 16.3 | |
| | 58.2 | 69.6 | 59.9 | 76.3 | 62.0 | 82.2 | 58.9 | 87.5 | 91.8 | 67.1 | 20.6 | |
| | 46.6 | 54.6 | 60.3 | 56.6 | 50.2 | 50.8 | 51.0 | 57.6 | 79.6 | 39.9 | 12.7 | |
| Mean | 59.0 | 1.0 | 57.5 | 55.7 | 63.0 | 67.4 | 63.9 | 60.3 | 42.5 | 13.2 | 3.3 | Fold Induction (1nM DH |
| Std Dev | 9.6 | 0.1 | 12.9 | 13.4 | 11.3 | 16.8 | 15.4 | 14.8 | 9.1 | 3.8 | 0.6 | |
| SEM | 4.8 | 0.1 | 6.5 | 6.7 | 5.6 | 8.4 | 7.7 | 7.4 | 4.5 | 1.9 | 0.3 | |
| CV% | *16.3* | *13.8* | *22.5* | *24.0* | *17.9* | *24.9* | *24.1* | *24.5* | *21.3* | *28.9* | *19.3* | |
| Relative Trar | 100 | 1.7 | 97.4 | 94.4 | 106.7 | 114.2 | 108.3 | 102.2 | 72.1 | 22.4 | 5.7 | |
| Mean | 54.3 | 61.4 | 66.5 | 68.6 | 65.0 | 78.9 | 60.3 | 79.9 | 85.0 | 58.6 | 17.4 | Fold Induction (1000nM |
| Std Dev | 5.1 | 6.8 | 9.5 | 8.5 | 11.6 | 20.3 | 9.1 | 14.9 | 5.6 | 12.6 | 3.7 | |
| SEM | 3.1 | 3.4 | 4.7 | 4.3 | 5.8 | 10.2 | 4.6 | 7.4 | 2.8 | 6.3 | 1.8 | |
| CV% | *11.3* | *11.0* | *14.2* | *12.4* | *17.8* | *25.8* | *15.2* | *18.6* | *6.6* | *21.6* | *21.1* | |
| Relative Trar | 100 | 113.1 | 122.5 | 126.4 | 119.8 | 145.4 | 111.1 | 147.3 | 156.5 | 107.9 | 32.1 | |

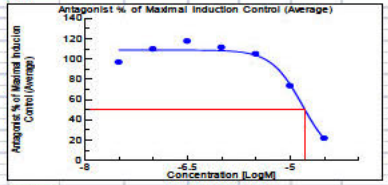



**Viability (% Control)**

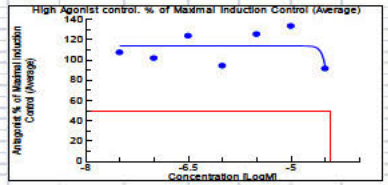
| Octocrylene Antag | 10nM DHT | neg. cont | Induced ( | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 79 | 100 | 104 | 111 | 108 | 116 | 115 | 110 | 107 | 90 | 66 |
| StdDev | 10 | 2 | 4 | 3 | 6 | 7 | 4 | 6 | 7 | 9 | 3 |
| SEM | 4 | 1 | 2 | 1 | 2 | 3 | 2 | 2 | 3 | 4 | 1 |
| %CV | 12.9 | 1.6 | 3.9 | 3.1 | 5.1 | 6.4 | 3.8 | 5.3 | 6.2 | 9.6 | 4.8 |

Fit: -4.8
Chart: #Ok




0 Bottom
109.2 Top
-4.8 EC50
-1.9 Hill slope

Fit: >-4.5
Chart: #Ok




0 Bottom
114.3 Top
-4.4 EC50
-8.8 Hill slope

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 13oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 13:23 | | Study Number: | 9070-100107 |
| Assay Conducted by: | [redacted] | Compound | Oxybenzone |

| Oxybenzone ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1291050 | 23850 | 24400 | 34350 | 29650 | 28650 | 21400 | 28100 | 24050 | 3200 | 1000 | |
| B | 100 | 1415950 | 29850 | 30600 | 35600 | 45850 | 31400 | 25450 | 27800 | 25400 | 3650 | 1300 | |
| C | 50 | 1765300 | 32100 | 33900 | 36600 | 46100 | 33300 | 31200 | 31250 | 25500 | 3950 | 1550 | |
| D | 100 | 1522550 | 32400 | 33100 | 38700 | 46700 | 29650 | 29000 | 30800 | 31250 | 4050 | 3150 | |
| E | 50 | 1648650 | 31700 | 31150 | 41450 | 48250 | 35600 | 31750 | 33250 | 27400 | 3450 | 4200 | |
| F | 0 | 1769500 | 40250 | 31550 | 34350 | 43200 | 28550 | 29150 | 33400 | 31800 | 3300 | 4000 | |
| G | *0* | *667400* | *106050* | *100800* | *102050* | *96700* | *150450* | *50500* | *448300* | *267200* | *3800* | *3450* | with 10µM Nilutamide |
| H | *0* | *437550* | *29350* | *33450* | *37650* | *38450* | *31850* | *37600* | *55400* | *38600* | *3250* | *3000* | with 10µM Nilutamide |
| Mean | 58 | 1568833 | 31238 | | 36842 | 43292 | 31192 | 27992 | 30767 | 27567 | 3600 | 2533 | |
| Std Dev | 38 | 193864 | 4241 | | 2782 | 6881 | 2819 | 3916 | 2419 | 3251 | 346 | 1425 | |
| SEM | 15 | 79145 | 1224 | | 1136 | 2809 | 1151 | 1599 | 987 | 1327 | 141 | 582 | |
| CV% | *64.5* | *12.4* | *13.58* | | *7.6* | *15.9* | *9.0* | *14.0* | *7.9* | *11.8* | *9.6* | *56.2* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 552475 | 82413 | | 69850 | 67575 | 91150 | 48550 | 251850 | 152900 | 3525 | 3225 | |
| Std Dev | 0 | 162528 | 63025 | | 45538 | 41189 | 83863 | 15486 | 277822 | 161645 | 389 | 318 | |

Mean VC 31238 Mean Nilutamide Control 82413

**Subtraction of VC from wells**

| Oxybenzone ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1259813 | -7388 | -6838 | 3113 | -1588 | -2588 | -9838 | -3138 | -7188 | -28038 | -30238 | |
| B | 100 | 1384713 | -1388 | -638 | 4363 | 14613 | 163 | -5788 | -3438 | -5838 | -27588 | -29938 | |
| C | 50 | 1734063 | 863 | 2663 | 5363 | 14863 | 2063 | -38 | 13 | -5738 | -27288 | -29688 | |
| D | 100 | 1491313 | 1163 | 1863 | 7463 | 15463 | -1588 | -2238 | -438 | 13 | -27188 | -28088 | |
| E | 50 | 1617413 | 463 | -88 | 10213 | 17013 | 4363 | 513 | 2013 | -3838 | -27788 | -27038 | |
| F | 0 | 1738263 | 9013 | 313 | 3113 | 11963 | -2688 | -2088 | 2163 | 563 | -27938 | -27238 | |
| G | 0 | 584988 | 23638 | 78388 | 19638 | 14288 | 68038 | -22913 | 365888 | 184788 | -78613 | -78963 | with 10µM Nilutamide |
| H | 0 | 355138 | -53063 | -48963 | -44763 | -43963 | -50563 | -44813 | -27013 | -43813 | -79163 | -79413 | with 10µM Nilutamide |

**Corrected Data Means**

| Oxybenzone ag | blank | 10nM DHT | neg. control | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 58 | 1537596 | 0 | | 5604 | 12054 | -46 | -3246 | -471 | -3671 | -27638 | -28704 |
| Std Dev | 38 | 193864 | 4241 | | 2782 | 6881 | 2819 | 3916 | 2419 | 3251 | 346 | 1425 |
| SEM | 15 | 79145 | 1224 | | 1136 | 2809 | 1151 | 1599 | 987 | 1327 | 141 | 582 |
| CV% | *64.5* | *12.6* | | | *49.6* | *57.1* | *-6150.8* | *-120.7* | *-513.7* | *-88.6* | *-1.3* | *-5.0* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

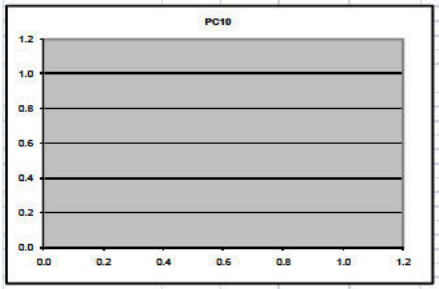
**Agonist: % of Maximal Induction Control**

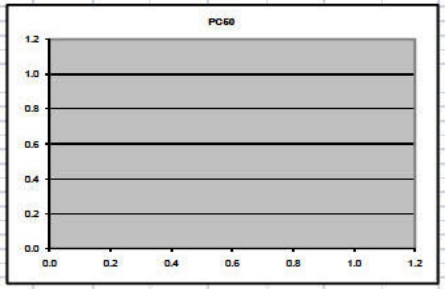
| Oxybenzone ag | blank | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 81.9 | -0.5 | -0.4 | 0.2 | -0.1 | -0.2 | -0.6 | -0.2 | -0.5 | -1.8 | -2.0 | |
| B | 0.0 | 90.1 | -0.1 | 0.0 | 0.3 | 1.0 | 0.0 | -0.4 | -0.2 | -0.4 | -1.8 | -1.9 | |
| C | 0.0 | 112.8 | 0.1 | 0.2 | 0.3 | 1.0 | 0.1 | 0.0 | 0.0 | -0.4 | -1.8 | -1.9 | |
| D | 0.0 | 97.0 | 0.1 | 0.1 | 0.5 | 1.0 | -0.1 | -0.1 | 0.0 | 0.0 | -1.8 | -1.8 | |
| E | 0.0 | 105.2 | 0.0 | 0.0 | 0.7 | 1.1 | 0.3 | 0.0 | 0.1 | -0.2 | -1.8 | -1.8 | |
| F | 0.0 | 113.1 | 0.6 | 0.0 | 0.2 | 0.8 | -0.2 | -0.1 | 0.1 | 0.0 | -1.8 | -1.8 | |
| G | 0.0 | 38.0 | 1.5 | 5.1 | 1.3 | 0.9 | 4.4 | -1.5 | 23.8 | 12.0 | -5.1 | -5.1 | with 10µM Nilutamide |
| H | 0.0 | 23.1 | -3.5 | -3.2 | -2.9 | -2.9 | -3.3 | -2.9 | -1.8 | -2.8 | -5.1 | -5.2 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Oxybenzone ag | blank | 10nM DHT | neg. control | | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.4 | 0.8 | 0.0 | -0.2 | 0.0 | -0.2 | | |
| Std Dev | 0.0 | 12.6 | 0.3 | | 0.2 | 0.4 | 0.2 | 0.3 | 0.2 | 0.2 | | |
| SEM | 0.0 | 5.1 | 0.1 | | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | | |

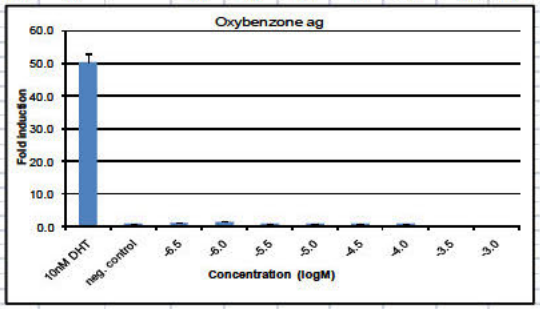
| | | | | |
|---|---|---|---|---|
| PC10 | | | PC50 | |

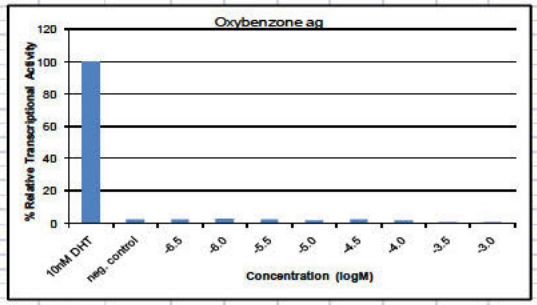



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 41.3 | 0.8 | 0.8 | 1.1 | 0.9 | 0.9 | 0.7 | 0.9 | 0.8 | 0.1 | 0.0 |
| | 45.3 | 1.0 | 1.0 | 1.1 | 1.5 | 1.0 | 0.8 | 0.9 | 0.8 | 0.1 | 0.0 |
| | 56.5 | 1.0 | 1.1 | 1.2 | 1.5 | 1.1 | 1.0 | 1.0 | 0.8 | 0.1 | 0.0 |
| | 48.7 | 1.0 | 1.1 | 1.2 | 1.5 | 0.9 | 0.9 | 1.0 | 1.0 | 0.1 | 0.1 |
| | 52.8 | 1.0 | 1.0 | 1.3 | 1.5 | 1.1 | 1.0 | 1.1 | 0.9 | 0.1 | 0.1 |
| | 56.6 | 1.3 | 1.0 | 1.1 | 1.4 | 0.9 | 0.9 | 1.1 | 1.0 | 0.1 | 0.1 |
| Mean | 50.2 | 1.0 | | 1.2 | 1.4 | 1.0 | 0.9 | 1.0 | 0.9 | 0.1 | 0.1 |
| Std Dev | 6.2 | 0.1 | | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| SEM | 2.5 | 0.0 | | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| CV% | *12.4* | *13.6* | | *7.6* | *15.9* | *9.0* | *14.0* | *7.9* | *11.8* | *9.6* | *56.2* |
| Relative Tran | 100 | 2.0 | | 2.3 | 2.8 | 2.0 | 1.8 | 2.0 | 1.8 | 0.2 | 0.2 |

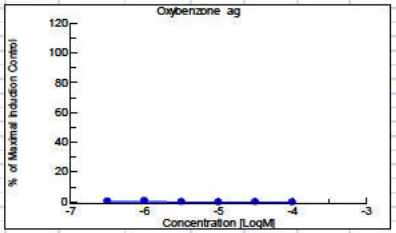



**Viability (% Control)**

| Oxybenzone ag | 10nM DHT | neg. con | neg. con | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 104 | 100 | 103 | 104 | 106 | 102 | 101 | 99 | 94 | 66 | 63 |
| StdDev | 3 | 5 | 3 | 6 | 5 | 4 | 4 | 6 | 4 | 5 | 6 |
| SEM | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| %CV | 3.1 | 4.7 | 2.9 | 5.5 | 5.0 | 3.9 | 4.4 | 6.1 | 4.6 | 7.5 | 10.1 |

| | |
|---|---|
| Fit | #interse |
| Chart | ct |
| | #Ok |




| | |
|---|---|
| 0 | Bottom |
| 0.4 | Top |
| -5.7 | EC50 |
| -71.9 | Hill slope |

# Data Spreadsheets

Experiment date: 13Oct2011
TopCount Model B9912V. Serial# 408672
11/11/11 13:23
Assay Conducted by: [redacted]

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound Oxybenzone

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Oxybenzone ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1059100 | 26400 | 1053450 | 928350 | 983900 | 1201400 | 1072200 | 624500 | 229350 | 2750 | 2600 | with 1nM DHT |
| B | 200 | 1098500 | 20650 | 1138300 | 1084550 | 1033250 | 1262850 | 1013100 | 825550 | 269900 | 3300 | 1900 | with 1nM DHT |
| C | 50 | 950150 | 21450 | 996950 | 1247350 | 1192900 | 1278650 | 1083150 | 816750 | 218900 | 3350 | 2600 | with 1nM DHT |
| D | 150 | 1028650 | 20350 | 990700 | 1138050 | 969100 | 1310500 | 1110600 | 772800 | 231800 | 3800 | 3150 | with 1nM DHT |
| E | 50 | 1212500 | 1124900 | 1140300 | 1213000 | 1166500 | 1443300 | 1430350 | 1592950 | 1514100 | 6400 | 6650 | with 1000nM DHT |
| F | 50 | 957200 | 897200 | 1169700 | 1261300 | 1142950 | 1315950 | 1493000 | 1673500 | 1631700 | 5300 | 6050 | with 1000nM DHT |
| G | 50 | 951350 | 976650 | 993700 | 1173950 | 1280000 | 1407650 | 1515650 | 1900800 | 1957050 | 20400 | 39100 | with 1000nM DHT |
| H | 0 | 995400 | 1020550 | 1033050 | 1253600 | 1022700 | 1361000 | 1502200 | 1678650 | 1662350 | 67900 | 238000 | with 1000nM DHT |
| Mean | 113 | 1034100 | 22213 | 1044850 | 1102075 | 1044788 | 1263350 | 1069763 | 759900 | 237488 | 3300 | 2563 | |
| Std Dev | 75 | 62848 | 2830 | 68395 | 132459 | 102480 | 45809 | 41083 | 93169 | 22321 | 430 | 512 | |
| SEM | 38 | 31424 | 1415 | 34197 | 66229 | 51240 | 22904 | 20542 | 46585 | 11160 | 215 | 256 | |
| CV% | 66.7 | 6.1 | 12.7 | 6.5 | 12.0 | 9.8 | 3.6 | 3.8 | 12.3 | 9.4 | 13.0 | 20.0 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 1.0 | 1.1 | 1.0 | 1.2 | 1.0 | 0.7 | 0.2 | 0.0 | 0.0 | Fold Induction (1000nM |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 38 | 1029138 | 1005375 | 1091238 | 1231163 | 1153038 | 1432025 | 1485350 | 1886475 | 1816300 | 25000 | 72500 | |
| Std Dev | 25 | 123858 | 94731 | 92868 | 46127 | 105499 | 65355 | 37699 | 12606 | 120766 | 29414 | 111402 | |
| SEM | 13 | 61929 | 47366 | 46434 | 23063 | 52750 | 32677 | 18849 | 6303 | 60383 | 14707 | 55701 | |
| CV% | 66.7 | 12.0 | 9.4 | 6.5 | 3.7 | 9.1 | 4.6 | 2.3 | 0.7 | 6.6 | 117.7 | 153.7 | |

Mean VC 22213 Mean DHT 1000nM Control 1005375

**Subtraction of VC from wells**

| Oxybenzone ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -22163 | 1036888 | 4188 | 1031238 | 906138 | 961688 | 1179188 | 1049988 | 602288 | 207138 | -19463 | -19613 | with 1nM DHT |
| B | -22013 | 1076288 | -1563 | 1116088 | 1072338 | 1011038 | 1240638 | 990888 | 803338 | 247688 | -18913 | -20313 | with 1nM DHT |
| C | -22163 | 927938 | -763 | 974738 | 1225138 | 1170588 | 1256438 | 1060938 | 794538 | 196888 | -18863 | -19613 | with 1nM DHT |
| D | -22063 | 1006438 | -1863 | 968488 | 1115838 | 946888 | 1288288 | 1088388 | 750588 | 209588 | -18413 | -19063 | with 1nM DHT |
| E | -22163 | 1190388 | 1102688 | 1126288 | 1191388 | 1144288 | 1421288 | 1408338 | 1870738 | 1791888 | -15813 | -15363 | with 1000nM DHT |
| F | -22163 | 934988 | 874988 | 1167488 | 1259088 | 1120738 | 1493738 | 1470788 | 1851288 | 1809488 | -16913 | -16163 | with 1000nM DHT |
| G | -22163 | 929138 | 956638 | 971488 | 1153738 | 1257788 | 1385438 | 1493438 | 1878588 | 1934838 | -1813 | 16888 | with 1000nM DHT |
| H | -22213 | 973188 | 998338 | 1010838 | 1231588 | 1000488 | 1338788 | 1479988 | 1856438 | 1640138 | 45688 | 215788 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 1026094

| Oxybenzone ant | blank | 10nM DHT | neg. control | induced con | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -22100 | 1011888 | 0 | 1022638 | 1079863 | 1022575 | 1241138 | 1047550 | 737688 | 215275 | -18913 | -19650 |
| Std Dev | 75 | 62848 | 2830 | 68395 | 132459 | 102480 | 45809 | 41083 | 93169 | 22321 | 430 | 512 |
| SEM | 38 | 31424 | 1415 | 34197 | 66229 | 51240 | 22904 | 20542 | 46585 | 11160 | 215 | 256 |
| CV% | -0.3 | 6.2 | 6.7 | 6.7 | 12.3 | 10.0 | 3.7 | 3.9 | 12.6 | 10.4 | -2.3 | -2.6 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 1.0 | 1.1 | 1.0 | 1.2 | 1.0 | 0.7 | 0.2 | 0.0 | 0.0 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| Oxybenzone ant | blank | 10nM DHT | neg. control | induced cont | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.2 | 101.4 | 0.4 | 100.8 | 88.6 | 94.0 | 115.3 | 102.7 | 58.9 | 20.3 | -1.9 | -1.9 | with 1nM DHT |
| B | -2.2 | 105.2 | -0.2 | 109.1 | 104.9 | 98.9 | 121.3 | 96.9 | 78.6 | 24.2 | -1.8 | -2.0 | with 1nM DHT |
| C | -2.2 | 90.7 | -0.1 | 95.3 | 119.8 | 114.5 | 122.9 | 103.7 | 77.7 | 19.2 | -1.8 | -1.9 | with 1nM DHT |
| D | -2.2 | 98.4 | -0.2 | 94.7 | 109.1 | 92.6 | 126.0 | 106.4 | 73.4 | 20.5 | -1.8 | -1.9 | with 1nM DHT |
| E | -2.2 | 116.0 | 107.6 | 109.8 | 116.1 | 111.5 | 138.5 | 137.3 | 182.3 | 174.6 | -1.5 | -1.5 | with 1000nM DHT |
| F | -2.2 | 91.1 | 85.3 | 113.8 | 122.7 | 109.2 | 145.6 | 143.3 | 180.4 | 176.3 | -1.6 | -1.6 | with 1000nM DHT |
| G | -2.2 | 90.6 | 93.2 | 94.7 | 112.4 | 122.6 | 135.0 | 145.5 | 183.1 | 188.6 | -0.2 | 1.6 | with 1000nM DHT |
| H | -2.2 | 94.8 | 97.3 | 98.5 | 120.0 | 97.5 | 130.5 | 144.2 | 180.9 | 159.8 | 4.5 | 21.0 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Oxybenzone ant | blank | 10nM DHT | neg. control | induced con | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.2 | 98.9 | 0.0 | 100.0 | 105.6 | 100.0 | 121.4 | 102.4 | 72.1 | 21.1 | | |
| Std Dev | 0.0 | 6.1 | 0.3 | 6.1 | 13.0 | 10.0 | 4.5 | 4.0 | 9.1 | 2.2 | | |
| SEM | 0.0 | 3.1 | 0.1 | 3.3 | 6.5 | 5.0 | 2.3 | 2.0 | 4.6 | 1.1 | | |

**High Agonist control, % of Maximal Induction Control (Average)**

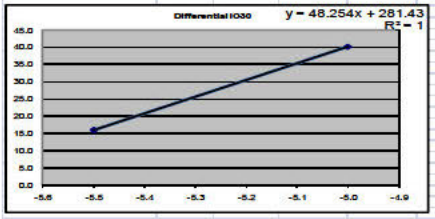
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.2 | 98.1 | 95.8 | 104.2 | 117.8 | 110.2 | 137.4 | 142.6 | 181.7 | 174.8 | | |
| Std Dev | 0.0 | 12.1 | 9.2 | 9.1 | 4.5 | 10.3 | 6.4 | 3.7 | 1.2 | 11.8 | | |
| SEM | 0.0 | 6.0 | 4.6 | 4.5 | 2.2 | 5.1 | 3.2 | 1.8 | 0.6 | 5.9 | | |

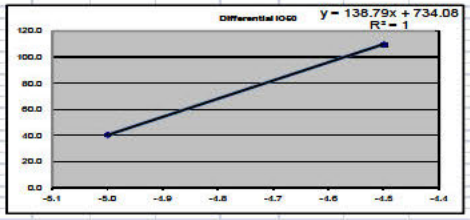
| Oxybenzone ant | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|
| Differential | 0.0 | -0.8 | 95.8 | 4.2 | 12.2 | 10.2 | 16.0 | 40.2 | 109.5 | 153.8 | | |

| | -6.5 | -6.0 |
|---|---|---|
| Differential IC30 | 16.0 | 40.2 |
| | -5.2 | |

| | -6.0 | -4.5 |
|---|---|---|
| Differential IC60 | 40.2 | 109.5 |
| | -4.9 | |

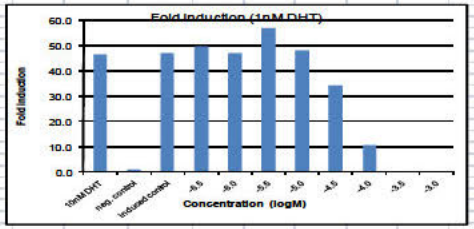
Relative Inhibitory Concentration Max (RICMax)
100.0 21.1 78.9

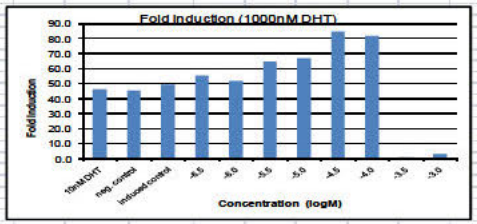



**FOLD INDUCTION**

| | 10nM DH | neg. control | induced con | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 47.7 | 1.2 | 47.4 | 41.8 | 44.3 | 54.1 | 48.3 | 28.1 | 10.3 | 0.1 | 0.1 |
| | 49.5 | 0.9 | 51.2 | 49.3 | 46.5 | 56.9 | 45.6 | 37.2 | 12.2 | 0.1 | 0.1 |
| | 42.8 | 1.0 | 44.9 | 56.2 | 53.7 | 57.6 | 48.8 | 36.8 | 9.9 | 0.2 | 0.1 |
| | 46.3 | 0.9 | 44.6 | 51.2 | 43.6 | 59.0 | 50.0 | 34.8 | 10.4 | 0.2 | 0.1 |
| | 54.6 | 50.6 | 51.7 | 54.6 | 52.5 | 65.0 | 64.4 | 85.2 | 81.7 | 0.3 | 0.3 |
| | 43.1 | 40.4 | 53.6 | 57.7 | 51.5 | 68.2 | 67.2 | 84.3 | 82.5 | 0.2 | 0.3 |
| | 42.8 | 44.1 | 44.7 | 52.9 | 57.6 | 63.4 | 68.2 | 85.6 | 88.1 | 0.9 | 1.8 |
| | 44.8 | 45.9 | 46.5 | 56.4 | 46.0 | 61.3 | 67.6 | 84.6 | 74.8 | 3.1 | 10.7 |
| Fold Induction (1nM DH | Mean | 46.6 | 1.0 | 47.0 | 49.6 | 47.0 | 56.9 | 48.2 | 34.2 | 10.7 | 0.1 | 0.1 |
| | Std Dev | 2.8 | 0.1 | 3.1 | 6.0 | 4.6 | 2.1 | 1.8 | 4.2 | 1.0 | 0.0 | 0.0 |
| | SEM | 1.4 | 0.1 | 1.5 | 3.0 | 2.3 | 1.0 | 0.9 | 2.1 | 0.5 | 0.0 | 0.0 |
| | CV% | 6.1 | 12.7 | 6.5 | 12.0 | 9.8 | 3.6 | 3.8 | 12.3 | 9.4 | 13.0 | 20.0 |
| | Relative Trar | 100 | 2.1 | 101.0 | 106.6 | 101.0 | 122.2 | 103.4 | 73.5 | 23.0 | 0.3 | 0.2 |
| Fold Induction (1000nM | Mean | 46.3 | 45.3 | 49.1 | 55.4 | 51.9 | 64.5 | 66.9 | 84.9 | 81.8 | 1.1 | 3.3 |
| | Std Dev | 5.6 | 4.3 | 4.2 | 2.1 | 4.7 | 2.9 | 1.7 | 0.6 | 5.4 | 1.3 | 5.0 |
| | SEM | 2.8 | 2.1 | 2.1 | 1.0 | 2.4 | 1.5 | 0.8 | 0.3 | 2.7 | 0.7 | 2.5 |
| | CV% | 12.0 | 9.4 | 8.5 | 3.7 | 9.1 | 4.6 | 2.5 | 0.7 | 6.6 | 117.7 | 153.7 |
| | Relative Trar | 100 | 97.7 | 106.0 | 119.6 | 112.0 | 139.1 | 144.3 | 183.3 | 176.5 | 2.4 | 7.0 |

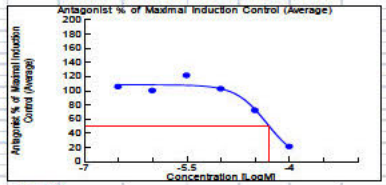



**Viability (% Control)**

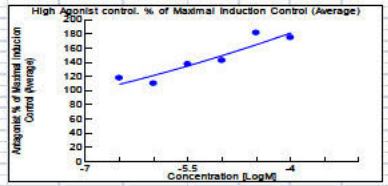
| Oxybenzone ant | 10nM DHT | neg. cont | induced | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | -3.5 | -3.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 104 | 100 | 103 | 104 | 106 | 102 | 101 | 99 | 94 | 66 | 63 |
| StdDev | 3 | 5 | 3 | 6 | 5 | 4 | 4 | 6 | 4 | 5 | 6 |
| SEM | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| %CV | 3.1 | 4.7 | 2.9 | 5.5 | 5.0 | 3.9 | 4.4 | 6.1 | 4.6 | 7.5 | 10.1 |

Fit -4.3
Chart #Ok




0 Bottom
108.9 Top
-4.3 EC50
-1.9 Hill slope

Fit <-6.5
Chart #Ok




0 Bottom
567.7 Top
-1.2 EC50
0.1 Hill slope

# Data Spreadsheets



| | | | |
|---|---|---|---|
| Experiment date: | 20Oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 13:23 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | [redacted] | Compound | Oxybenzone |

| Oxybenzone | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 549000 | 8700 | 8500 | 9450 | 8700 | 10600 | 7400 | 9650 | 8800 | 8400 | 7250 | |
| B | 100 | 551450 | 10650 | 8200 | 6900 | 8350 | 8900 | 6300 | 8850 | 7450 | 8700 | 7300 | |
| C | 50 | 593700 | 9450 | 9700 | 12200 | 9250 | 7700 | 7250 | 10000 | 7850 | 7200 | 8000 | |
| D | 0 | 478100 | 9250 | 10950 | 8600 | 9300 | 11800 | 7950 | 9900 | 7950 | 7300 | 7500 | |
| E | 50 | 499450 | 9000 | 9200 | 11650 | 9800 | 12900 | 8950 | 9000 | 9550 | 7900 | 7500 | |
| F | 0 | 605400 | 8350 | 8950 | 9450 | 10000 | 9900 | 7900 | 9250 | 7600 | 6550 | 6550 | |
| G | *50* | *364000* | *64700* | *60300* | *62000* | *50600* | *55950* | *18800* | *49350* | *48150* | *35000* | *10150* | with 10µM Nilutamide |
| H | *0* | *281800* | *14450* | *18650* | *18500* | *19800* | *18750* | *16250* | *24800* | *18500* | *15900* | *9500* | with 10µM Nilutamide |
| Mean | 33 | 546183 | 9242 | | 9708 | 9233 | 10300 | 7625 | 9442 | 8200 | 7675 | 7350 | |
| Std Dev | 41 | 50238 | 854 | | 1961 | 629 | 1896 | 881 | 479 | 811 | 807 | 473 | |
| SEM | 17 | 20510 | 247 | | 801 | 257 | 774 | 360 | 196 | 331 | 330 | 193 | |
| CV% | *122.5* | *9.2* | *9.24* | | *20.2* | *6.8* | *18.4* | *11.6* | *5.1* | *9.9* | *10.5* | *6.4* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 25 | 323200 | 44525 | | 40700 | 35200 | 37350 | 17525 | 37075 | 33325 | 25450 | 9825 | |
| Std Dev | 35 | 58548 | 32969 | | 31396 | 21779 | 26304 | 1803 | 17359 | 20966 | 13506 | 460 | |
| Mean VC | 9242 | | Mean Nilutamide Control | | 44525 | | | | | | | | |

**Subtraction of VC from wells**

| Oxybenzone | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 539758 | -542 | -742 | 208 | -542 | 1358 | -1842 | 408 | -442 | -842 | -1992 | |
| B | 100 | 542208 | 1408 | -1042 | -2342 | -892 | -342 | -2942 | -392 | -1792 | -542 | -1942 | |
| C | 50 | 584458 | 208 | 458 | 2958 | 8 | -1542 | -1992 | 758 | -1392 | -2042 | -1242 | |
| D | 0 | 468858 | 8 | 1708 | -642 | 58 | 2558 | -1292 | 658 | -1292 | -1942 | -1742 | |
| E | 50 | 490208 | -242 | -42 | 2408 | 558 | 3658 | -292 | -242 | 308 | -1342 | -1742 | |
| F | 0 | 596158 | -892 | -292 | 208 | 758 | 658 | -1342 | 8 | -1642 | -2692 | -2692 | |
| G | 50 | 320075 | 20175 | 35775 | 18375 | 6075 | 11425 | -25725 | 4825 | 3625 | -9525 | -34375 | with 10µM Nilutamide |
| H | 0 | 237275 | -30075 | -25875 | -26025 | -24725 | -25775 | -28275 | -19725 | -26025 | -28625 | -35025 | with 10µM Nilutamide |

**Corrected Data Means**

| Oxybenzone | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 33 | 536942 | 0 | | 467 | -8 | 1058 | -1617 | 200 | -1042 | -1567 | -1892 |
| Std Dev | 41 | 50238 | 854 | | 1961 | 629 | 1896 | 881 | 479 | 811 | 807 | 473 |
| SEM | 17 | 20510 | 247 | | 801 | 257 | 774 | 360 | 196 | 331 | 330 | 193 |
| CV% | *122.5* | *9.4* | | | *420.2* | *-7548.2* | *179.2* | *-54.5* | *239.5* | *-77.0* | *-51.5* | *-25.0* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

**Agonist: % of Maximal Induction Control**

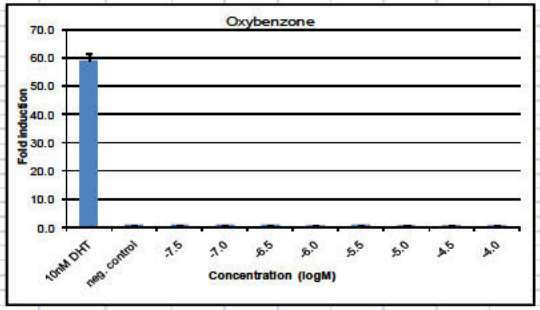
| Oxybenzone | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 100.5 | -0.1 | -0.1 | 0.0 | -0.1 | 0.3 | -0.3 | 0.1 | -0.1 | -0.2 | -0.4 | |
| B | 0.0 | 101.0 | 0.3 | -0.2 | -0.4 | -0.2 | -0.1 | -0.5 | -0.1 | -0.3 | -0.1 | -0.4 | |
| C | 0.0 | 108.8 | 0.0 | 0.1 | 0.6 | 0.0 | -0.3 | -0.4 | 0.1 | -0.3 | -0.4 | -0.2 | |
| D | 0.0 | 87.3 | 0.0 | 0.3 | -0.1 | 0.0 | 0.5 | -0.2 | 0.1 | -0.2 | -0.4 | -0.3 | |
| E | 0.0 | 91.3 | 0.0 | 0.0 | 0.4 | 0.1 | 0.7 | -0.1 | 0.0 | 0.1 | -0.2 | -0.3 | |
| F | 0.0 | 111.0 | -0.2 | -0.1 | 0.0 | 0.1 | 0.1 | -0.2 | 0.0 | -0.3 | -0.5 | -0.5 | |
| G | 0.0 | 59.6 | 3.8 | 6.7 | 3.4 | 1.1 | 2.1 | -4.8 | 0.9 | 0.7 | -1.8 | -6.4 | with 10µM Nilutamide |
| H | 0.0 | 44.2 | -5.6 | -4.8 | -4.8 | -4.6 | -4.8 | -5.3 | -3.7 | -4.8 | -5.3 | -6.5 | with 10µM Nilutamide |

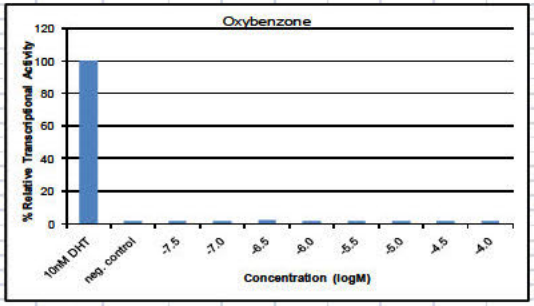
**% of Maximal Induction Control**

| Oxybenzone | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.1 | 0.0 | 0.2 | -0.3 | 0.0 | -0.2 | -0.3 | |
| Std Dev | 0.0 | 9.4 | 0.2 | | 0.4 | 0.1 | 0.4 | 0.2 | 0.1 | 0.2 | 0.2 | |
| SEM | 0.0 | 3.8 | 0.0 | | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | |

**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 59.4 | 0.9 | 0.9 | 1.0 | 0.9 | 1.1 | 0.8 | 1.0 | 1.0 | 0.9 | 0.8 |
| | 59.7 | 1.2 | 0.9 | 0.7 | 0.9 | 1.0 | 0.7 | 1.0 | 0.8 | 0.9 | 0.8 |
| | 64.2 | 1.0 | 1.0 | 1.3 | 1.0 | 0.8 | 0.8 | 1.1 | 0.8 | 0.8 | 0.9 |
| | 51.7 | 1.0 | 1.2 | 0.9 | 1.0 | 1.3 | 0.9 | 1.1 | 0.9 | 0.8 | 0.8 |
| | 54.0 | 1.0 | 1.0 | 1.3 | 1.1 | 1.4 | 1.0 | 1.0 | 1.0 | 0.9 | 0.8 |
| | 65.5 | 0.9 | 1.0 | 1.0 | 1.1 | 1.1 | 0.9 | 1.0 | 0.8 | 0.7 | 0.7 |
| Mean | 59.1 | 1.0 | | 1.1 | 1.0 | 1.1 | 0.8 | 1.0 | 0.9 | 0.8 | 0.8 |
| Std Dev | 5.4 | 0.1 | | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| SEM | 2.2 | 0.0 | | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| CV% | *9.2* | *9.2* | | *20.2* | *6.8* | *18.4* | *11.6* | *5.1* | *9.9* | *10.5* | *6.4* |
| Relative Tran | 100 | 1.7 | | 1.8 | 1.7 | 1.9 | 1.4 | 1.7 | 1.5 | 1.4 | 1.3 |

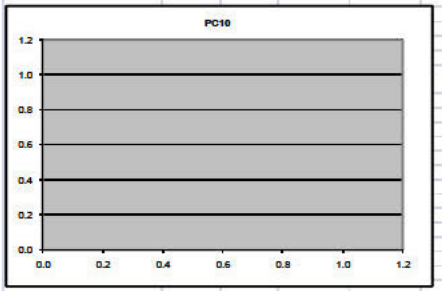


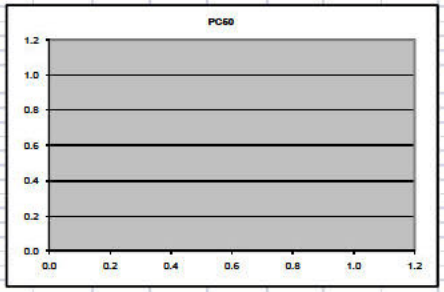




**Viability (% Control)**

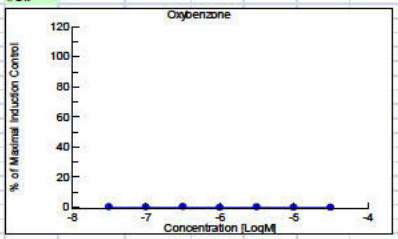
| Oxybenzone | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 99 | 100 | 103 | 99 | 101 | 97 | 97 | 97 | 96 | 92 | 80 |
| StdDev | 4 | 4 | 5 | 3 | 4 | 3 | 4 | 5 | 5 | 4 | 4 |
| SEM | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 |
| %CV | 4.3 | 3.7 | 5.1 | 2.8 | 3.9 | 2.7 | 3.8 | 4.8 | 4.8 | 4.4 | 5.3 |

PC10 [redacted] PC50 [redacted]




Fit Chart: #Intersect #Ok




0 Bottom
0.1 Top
-7.3 EC50
-1.2 Hill slope

# Data Spreadsheets

Experiment date: 20Oct2011
TopCount Model B9912V. Serial# 408672
11/11/11 13:23
Assay Conducted by: [redacted]

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Oxybenzone

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Oxybenzone | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 587750 | 12650 | 524250 | 604650 | 616400 | 495400 | 509100 | 600900 | 592100 | 383550 | 116550 | with 1nM DHT |
| B | 0 | 482550 | 9600 | 474950 | 487200 | 466100 | 527150 | 476400 | 590750 | 560950 | 414450 | 116050 | with 1nM DHT |
| C | 50 | 471100 | 8800 | 347950 | 479450 | 399550 | 458600 | 494250 | 474600 | 551600 | 389500 | 99800 | with 1nM DHT |
| D | 0 | 379050 | 7350 | 382850 | 376900 | 398400 | 396050 | 411600 | 454400 | 423300 | 356150 | 106000 | with 1nM DHT |
| E | *0* | *446450* | *396700* | *415350* | *323300* | *350400* | *406050* | *419250* | *522600* | *660700* | *676850* | *679200* | with 1000nM DHT |
| F | *0* | *397150* | *352600* | *404150* | *330750* | *369400* | *384550* | *463650* | *537700* | *654800* | *811100* | *743600* | with 1000nM DHT |
| G | *0* | *523200* | *456550* | *391900* | *436800* | *376000* | *427650* | *437000* | *536150* | *717450* | *703100* | *709000* | with 1000nM DHT |
| H | *0* | *615750* | *481700* | *504350* | *439750* | *392300* | *410950* | *511550* | *472100* | *607300* | *662250* | *617950* | with 1000nM DHT |
| Mean | 13 | 480113 | 9575 | 432500 | 487050 | 470113 | 469300 | 472838 | 530163 | 531963 | 385913 | 109375 | Fold Induction (1nM DH |
| Std Dev | 25 | 85414 | 2237 | 81310 | 93132 | 102531 | 56296 | 42958 | 76380 | 74489 | 23935 | 7895 | |
| SEM | 13 | 42707 | 1118 | 40655 | 46566 | 51266 | 28148 | 21479 | 38190 | 37245 | 11967 | 3948 | |
| CV% | *200.0* | *17.8* | *23.4* | *18.8* | *19.1* | *21.8* | *12.0* | *9.1* | *14.4* | *14.0* | *6.2* | *7.2* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | 0.8 | 0.2 | Fold Induction (1000nM |
| Rogs E-H | | | | | | | | | | | | | |
| Mean | 0 | 496638 | 421888 | 428938 | 382600 | 372525 | 407800 | 457863 | 517188 | 665013 | 713325 | 737488 | |
| Std Dev | 0 | 95404 | 58350 | 51179 | 64257 | 17515 | 17744 | 40175 | 30794 | 46314 | 67339 | 108356 | |
| SEM | 0 | 47702 | 29175 | 25589 | 32129 | 8757 | 8872 | 20087 | 15397 | 23157 | 33669 | 54178 | |
| CV% | | *19.2* | *13.8* | *11.9* | *16.8* | *4.7* | *4.4* | *8.8* | *6.0* | *7.0* | *9.4* | *14.7* | |

Mean VC: 9575 — Mean DHT 1000nM Control: 421888

**Subtraction of VC from wells**

| Oxybenzone | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -9575 | 578175 | 3075 | 514675 | 595075 | 606825 | 485825 | 499525 | 591325 | 582525 | 373975 | 106075 | with 1nM DHT |
| B | -9575 | 472975 | -75 | 465375 | 477625 | 456525 | 517575 | 466825 | 581175 | 551375 | 404875 | 106475 | with 1nM DHT |
| C | -9525 | 461525 | -775 | 338375 | 469875 | 389975 | 449025 | 484675 | 465025 | 541925 | 379925 | 90225 | with 1nM DHT |
| D | -9575 | 369475 | -2225 | 373275 | 367325 | 388825 | 386475 | 402025 | 444825 | 413725 | 346575 | 96425 | with 1nM DHT |
| E | -9575 | 436875 | 387125 | 405775 | 313725 | 340825 | 398475 | 409675 | 513225 | 671125 | 667275 | 869625 | with 1000nM DHT |
| F | -9575 | 387575 | 343025 | 394575 | 321175 | 359825 | 374975 | 454075 | 528125 | 645025 | 801525 | 734225 | with 1000nM DHT |
| G | -9575 | 513625 | 446975 | 382325 | 427025 | 368425 | 418075 | 427425 | 526575 | 707875 | 693525 | 699425 | with 1000nM DHT |
| H | -9575 | 606175 | 472125 | 494775 | 430175 | 382725 | 401375 | 501975 | 462525 | 597725 | 652675 | 608375 | with 1000nM DHT |

**VC Corrected Data Means** — AVG cntrl: 415838

| Oxybenzone | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -9563 | 470538 | 0 | 422925 | 477475 | 460538 | 459725 | 463263 | 520588 | 522388 | 376338 | 99800 |
| Std Dev | 25 | 85414 | 2237 | 81310 | 93132 | 102531 | 56296 | 42958 | 76380 | 74489 | 23935 | 7895 |
| SEM | 13 | 42707 | 1118 | 40655 | 46566 | 51266 | 28148 | 21479 | 38190 | 37245 | 11967 | 3948 |
| CV% | *-0.3* | *18.2* | | *19.2* | *19.5* | *22.3* | *12.2* | *9.3* | *14.7* | *14.3* | *6.4* | *7.9* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 | 0.8 | 0.2 | |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| Oxybenzone | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.3 | 136.7 | 0.7 | 121.7 | 140.7 | 143.5 | 114.9 | 118.1 | 139.8 | 137.7 | 88.4 | 25.1 | with 1nM DHT |
| B | -2.3 | 111.8 | 0.0 | 110.0 | 112.9 | 107.9 | 122.4 | 110.4 | 137.4 | 130.4 | 95.7 | 25.2 | with 1nM DHT |
| C | -2.3 | 109.1 | -0.2 | 80.0 | 111.1 | 92.2 | 106.2 | 114.6 | 110.0 | 128.1 | 89.8 | 21.3 | with 1nM DHT |
| D | -2.3 | 87.4 | -0.5 | 88.3 | 86.9 | 91.9 | 91.4 | 95.1 | 105.2 | 97.8 | 81.9 | 22.8 | with 1nM DHT |
| E | -2.3 | 105.1 | 93.1 | 97.6 | 75.4 | 82.0 | 95.8 | 98.5 | 123.4 | 161.4 | 160.5 | 209.1 | with 1000nM DHT |
| F | -2.3 | 93.2 | 82.5 | 94.9 | 77.2 | 86.5 | 90.2 | 109.2 | 127.0 | 155.1 | 192.7 | 176.6 | with 1000nM DHT |
| G | -2.3 | 123.5 | 107.5 | 91.9 | 102.7 | 88.6 | 100.5 | 102.8 | 126.6 | 170.2 | 166.8 | 168.2 | with 1000nM DHT |
| H | -2.3 | 145.8 | 113.5 | 119.0 | 103.4 | 92.0 | 96.5 | 120.7 | 111.2 | 143.7 | 157.0 | 146.3 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Oxybenzone | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.3 | 111.3 | 0.0 | 100.0 | 112.9 | 108.9 | 108.7 | 109.5 | 123.1 | 123.5 | 89.0 | |
| Std Dev | 0.0 | 20.2 | 0.5 | 19.2 | 22.0 | 24.2 | 13.3 | 10.2 | 18.1 | 17.6 | 5.7 | |
| SEM | 0.0 | 10.1 | 0.3 | 9.6 | 11.0 | 12.1 | 6.7 | 5.1 | 9.0 | 8.8 | 2.8 | |

**High Agonist control, % of Maximal Induction Control (Average)**

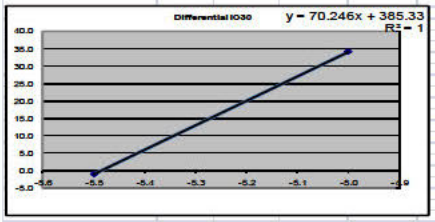
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.3 | 116.9 | 99.2 | 100.8 | 89.7 | 87.3 | 95.8 | 107.8 | 122.1 | 157.6 | 169.2 | |
| Std Dev | 0.0 | 22.9 | 14.0 | 12.3 | 15.5 | 4.2 | 4.3 | 9.7 | 7.4 | 11.1 | 16.2 | |
| SEM | 0.0 | 11.5 | 7.0 | 6.2 | 7.7 | 2.1 | 2.1 | 4.8 | 3.7 | 5.6 | 8.1 | |

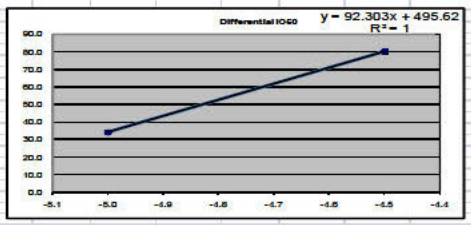
| Oxybenzone | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|
| Differential | 0.0 | 5.6 | 99.2 | 0.8 | -23.2 | -21.6 | -12.9 | -1.7 | -1.0 | 34.1 | 80.3 | |

| Differential IC30 | -5.5 | -5.0 |
|---|---|---|
| | -1.0 | 34.1 |
| | -5.1 | |

| Differential IC50 | -5.0 | -4.5 |
|---|---|---|
| | 34.1 | 80.3 |
| | -4.8 | |

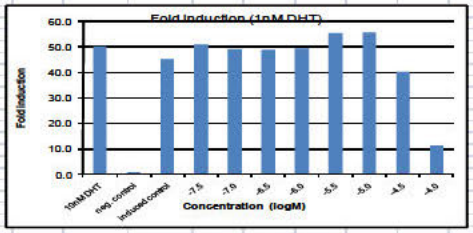
| Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|
| | 100.0 | 89.0 | 11.8 |

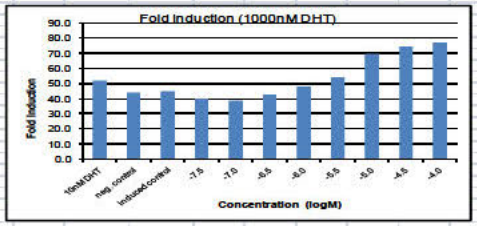



**FOLD INDUCTION**

| | 10nM DH | neg. control | Induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 61.4 | 1.3 | 54.8 | 63.1 | 64.4 | 51.7 | 53.2 | 62.8 | 61.8 | 40.1 | 12.1 |
| | 50.4 | 1.0 | 49.6 | 50.9 | 48.7 | 55.1 | 49.8 | 61.7 | 58.6 | 43.3 | 12.1 |
| | 49.2 | 0.9 | 36.5 | 50.1 | 41.7 | 47.9 | 51.6 | 49.6 | 57.6 | 40.7 | 10.4 |
| | 39.6 | 0.8 | 40.0 | 39.4 | 41.6 | 41.4 | 43.0 | 47.5 | 44.2 | 37.2 | 11.1 |
| | 46.6 | 41.4 | 43.4 | 33.8 | 36.6 | 42.6 | 43.8 | 54.6 | 71.1 | 70.7 | 91.8 |
| | 41.5 | 36.8 | 42.2 | 34.5 | 38.6 | 40.2 | 48.4 | 56.2 | 68.4 | 84.7 | 77.7 |
| | 54.6 | 47.7 | 40.9 | 45.6 | 39.5 | 44.7 | 45.6 | 56.0 | 74.9 | 73.4 | 74.0 |
| | 64.3 | 50.3 | 52.7 | 45.9 | 41.0 | 42.9 | 53.4 | 49.3 | 63.4 | 69.2 | 64.5 |
| Mean | 50.1 | 1.0 | 45.2 | 50.9 | 49.1 | 49.0 | 49.4 | 55.4 | 55.6 | 40.3 | 11.4 |
| Std Dev | 8.9 | 0.2 | 8.5 | 9.7 | 10.7 | 5.9 | 4.5 | 8.0 | 7.8 | 2.5 | 0.8 |
| SEM | 4.5 | 0.1 | 4.2 | 4.9 | 5.4 | 2.9 | 2.2 | 4.0 | 3.9 | 1.2 | 0.4 |
| CV% | *17.8* | *23.4* | *18.8* | *19.1* | *21.8* | *12.0* | *9.1* | *14.4* | *14.0* | *6.2* | *7.2* |
| Relative Tran | 100 | 2.0 | 90.1 | 101.4 | 97.9 | 97.7 | 98.5 | 110.4 | 110.8 | 80.4 | 22.8 |
| Mean | 51.8 | 44.1 | 44.8 | 40.0 | 38.9 | 42.6 | 47.8 | 54.0 | 69.5 | 74.5 | 77.0 |
| Std Dev | 10.0 | 6.1 | 5.3 | 5.7 | 1.8 | 1.9 | 4.2 | 3.2 | 4.8 | 7.0 | 11.3 |
| SEM | 5.0 | 3.0 | 2.7 | 3.4 | 0.9 | 0.9 | 2.1 | 1.6 | 2.4 | 3.5 | 5.7 |
| CV% | *19.2* | *13.8* | *11.9* | *16.8* | *4.7* | *4.4* | *8.8* | *6.0* | *7.0* | *9.4* | *14.7* |
| Relative Tran | 100 | 85.1 | 86.5 | 77.2 | 75.2 | 82.3 | 92.4 | 104.3 | 134.2 | 143.9 | 148.8 |

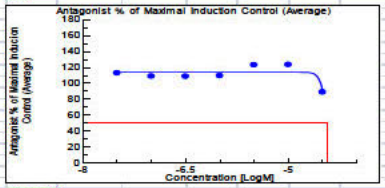



**Viability (% Control)**

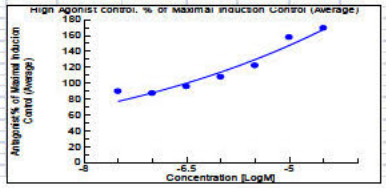
| Oxybenzone | 10nM DHT | neg. con | Induced | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 99 | 100 | 103 | 99 | 101 | 97 | 97 | 97 | 96 | 92 | 80 |
| StdDev | 4 | 4 | 5 | 3 | 4 | 3 | 4 | 5 | 5 | 4 | 4 |
| SEM | 2 | 2 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| %CV | 4.3 | 3.7 | 5.1 | 2.8 | 3.9 | 2.7 | 3.8 | 4.8 | 4.8 | 4.4 | 5.3 |

Fit Chart: >-4.5 #Ok




0 Bottom
114.4 Top
-4.4 EC50
-8.9 Hill slope

Fit Chart: <-7.5 #Ok




0 Bottom
5900.9 Top
8.9 EC50
0.1 Hill slope

# Data Spreadsheets

| | | | | |
|---|---|---|---|---|
| Experiment date: | 3Nov2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 | |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry | |
| 11/11/11 13:23 | | Study Number: | 9070-100107ARTA | |
| Assay Conducted by: | [redacted] | Compound | Oxybenzone | |

| Oxybenzone Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 204950 | 2800 | 3750 | 4500 | 3800 | 4250 | 3400 | 4750 | 6500 | 4400 | 4100 | |
| B | 0 | 269750 | 5100 | 4800 | 3750 | 4550 | 5150 | 3800 | 6650 | 5150 | 5000 | 5100 | |
| C | 0 | 282500 | 5450 | 3450 | 4350 | 5800 | 5750 | 5700 | 6350 | 6900 | 5800 | 5250 | |
| D | 0 | 279600 | 3500 | 4750 | 4650 | 4550 | 5700 | 4800 | 5400 | 4450 | 4600 | 5100 | |
| E | 0 | 267750 | 4600 | 5200 | 4700 | 4250 | 7050 | 5350 | 8350 | 5550 | 3900 | 4350 | |
| F | 0 | 282500 | 4250 | 4050 | 5600 | 3850 | 6950 | 4500 | 6750 | 5550 | 4650 | 4650 | |
| G | *0* | *110950* | *24250* | *16150* | *28700* | *28600* | *11950* | *6950* | *14650* | *13400* | *28200* | *8550* | with 10μM Nilutamide |
| H | *0* | *67500* | *7850* | *7050* | *7850* | *8100* | *6700* | *7250* | *9650* | *11250* | *7800* | *5450* | with 10μM Nilutamide |
| Mean | 0 | 264508 | 4308 | | 4592 | 4467 | 5808 | 4592 | 6375 | 5683 | 4725 | 4758 | |
| Std Dev | 0 | 29867 | 814 | | 601 | 730 | 1070 | 883 | 1242 | 893 | 639 | 466 | |
| SEM | 0 | 12193 | 235 | | 245 | 298 | 437 | 361 | 507 | 365 | 261 | 190 | |
| CV% | | *11.3* | *18.90* | | *13.1* | *16.3* | *18.4* | *19.2* | *19.5* | *15.7* | *13.5* | *9.8* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 89225 | 13825 | | 18175 | 18350 | 9325 | 8100 | 12150 | 12325 | 18000 | 7000 | |
| Std Dev | 0 | 30724 | 8076 | | 14885 | 14496 | 3712 | 1202 | 3536 | 1520 | 14425 | 2192 | |

Mean VC 4308 Mean Nilutamide Control 13825

**Subtraction of VC from wells**

| Oxybenzone Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 200642 | -1508 | -558 | 192 | -508 | -58 | -908 | 442 | 2192 | 92 | -208 | |
| B | 0 | 265442 | 792 | 492 | -558 | 242 | 842 | -508 | 2342 | 842 | 692 | 792 | |
| C | 0 | 278192 | 1142 | -858 | 42 | 1492 | 1442 | 1392 | 2042 | 2592 | 1492 | 942 | |
| D | 0 | 275292 | -608 | 442 | 342 | 242 | 1392 | 492 | 1092 | 142 | 292 | 792 | |
| E | 0 | 263442 | 292 | 892 | 392 | -58 | 2742 | 1042 | 4042 | 1242 | -408 | 42 | |
| F | 0 | 278192 | -58 | -258 | 1292 | -458 | 2642 | 192 | 2442 | 1242 | 342 | 342 | |
| G | 0 | 97125 | 10425 | 2325 | 14875 | 14775 | -1875 | -4875 | 825 | -425 | 14375 | -5275 | with 10μM Nilutamide |
| H | 0 | 53675 | -5975 | -6775 | -6175 | -5725 | -7125 | -6575 | -4175 | -2575 | -6025 | -8375 | with 10μM Nilutamide |

**Corrected Data Means**

| Oxybenzone Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0 | 260200 | 0 | | 283 | 158 | 1500 | 283 | 2067 | 1375 | 417 | 450 |
| Std Dev | 0 | 29867 | 814 | | 601 | 730 | 1070 | 883 | 1242 | 893 | 639 | 466 |
| SEM | 0 | 12193 | 235 | | 245 | 298 | 437 | 361 | 507 | 365 | 261 | 190 |
| CV% | | *11.5* | | | *212.2* | *461.0* | *71.3* | *311.8* | *60.1* | *65.0* | *153.3* | *103.6* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

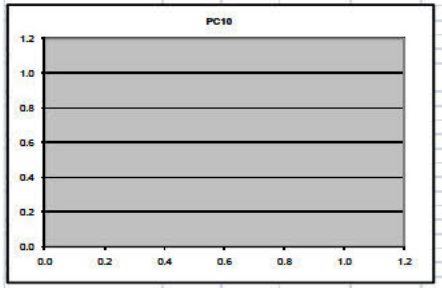
**Agonist: % of Maximal Induction Control**

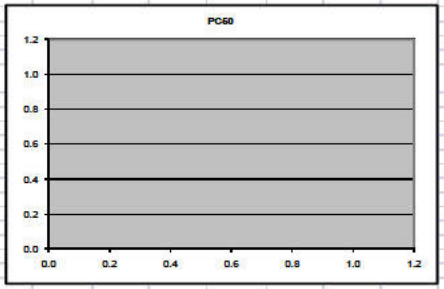
| Oxybenzone Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 77.1 | -0.6 | -0.2 | 0.1 | -0.2 | 0.0 | -0.3 | 0.2 | 0.8 | 0.0 | -0.1 | |
| B | 0.0 | 102.0 | 0.3 | 0.2 | -0.2 | 0.1 | 0.3 | -0.2 | 0.9 | 0.3 | 0.3 | 0.3 | |
| C | 0.0 | 106.9 | 0.4 | -0.3 | 0.0 | 0.6 | 0.6 | 0.5 | 0.8 | 1.0 | 0.6 | 0.4 | |
| D | 0.0 | 105.8 | -0.3 | 0.2 | 0.1 | 0.1 | 0.5 | 0.2 | 0.4 | 0.1 | 0.1 | 0.3 | |
| E | 0.0 | 101.2 | 0.1 | 0.3 | 0.2 | 0.0 | 1.1 | 0.4 | 1.6 | 0.5 | -0.2 | 0.0 | |
| F | 0.0 | 106.9 | 0.0 | -0.1 | 0.5 | -0.2 | 1.0 | 0.1 | 0.9 | 0.5 | 0.1 | 0.1 | |
| G | 0.0 | 37.3 | 4.0 | 0.9 | 5.7 | 5.7 | -0.7 | -1.9 | 0.3 | -0.2 | 5.5 | -2.0 | with 10μM Nilutamide |
| H | 0.0 | 20.6 | -2.3 | -2.6 | -2.4 | -2.2 | -2.7 | -2.5 | -1.6 | -1.0 | -2.3 | -3.2 | with 10μM Nilutamide |

**% of Maximal Induction Control**

| Oxybenzone Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | | 0.0 | | 0.1 | 0.1 | 0.6 | 0.1 | 0.8 | 0.5 | 0.2 | 0.2 |
| Std Dev | 0.0 | | 0.3 | | 0.2 | 0.3 | 0.4 | 0.3 | 0.5 | 0.3 | 0.2 | 0.2 |
| SEM | 0.0 | | 0.1 | | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |

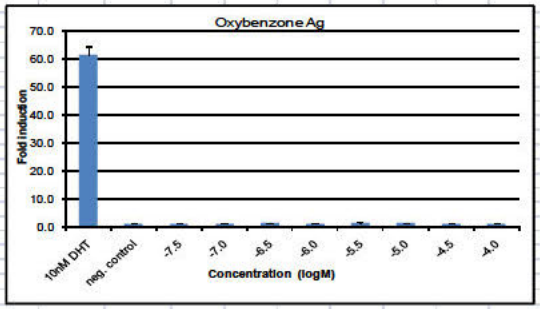
PC10 PC50

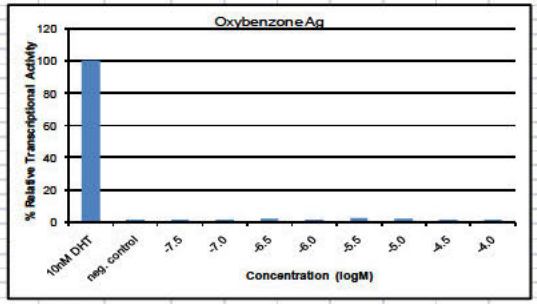



**FOLD INDUCTION**

| | 10nM DH | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 47.6 | 0.6 | 0.9 | 1.0 | 0.9 | 1.0 | 0.8 | 1.1 | 1.5 | 1.0 | 1.0 | |
| | 62.6 | 1.2 | 1.1 | 0.9 | 1.1 | 1.2 | 0.9 | 1.5 | 1.2 | 1.2 | 1.2 | |
| | 65.6 | 1.3 | 0.8 | 1.0 | 1.3 | 1.3 | 1.3 | 1.5 | 1.6 | 1.3 | 1.2 | |
| | 64.9 | 0.8 | 1.1 | 1.1 | 1.1 | 1.3 | 1.1 | 1.3 | 1.0 | 1.1 | 1.2 | |
| | 62.1 | 1.1 | 1.2 | 1.1 | 1.0 | 1.6 | 1.2 | 1.9 | 1.3 | 0.9 | 1.0 | |
| | 65.6 | 1.0 | 0.9 | 1.3 | 0.9 | 1.6 | 1.0 | 1.6 | 1.3 | 1.1 | 1.1 | |
| Mean | 61.4 | 1.0 | | 1.1 | 1.0 | 1.3 | 1.1 | 1.5 | 1.3 | 1.1 | 1.1 | |
| Std Dev | 6.9 | 0.2 | | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.1 | |
| SEM | 2.8 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | |
| CV% | *11.3* | *18.9* | | *13.1* | *16.3* | *18.4* | *19.2* | *19.5* | *15.7* | *13.5* | *9.8* | |
| Relative Tran | 100 | 1.6 | | 1.7 | 1.7 | 2.2 | 1.7 | 2.4 | 2.1 | 1.8 | 1.8 | |

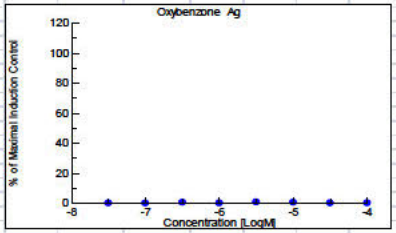



**Viability (% Control)**

| Oxybenzone Ag | 10nM DHT | neg. cont | neg. cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 78 | 100 | 113 | 116 | 107 | 120 | 121 | 116 | 121 | 124 | 97 |
| StdDev | 23 | 18 | 2 | 3 | 29 | 12 | 8 | 12 | 9 | 7 | 18 |
| SEM | 9 | 7 | 1 | 1 | 12 | 5 | 3 | 5 | 4 | 3 | 8 |
| %CV | 29.1 | 17.8 | 2.1 | 2.2 | 27.6 | 10.0 | 6.8 | 10.6 | 7.1 | 5.5 | 19.0 |

Fit #Interse
Chart ct
#Ok




0 Bottom
0.3 Top
####### EC50
####### Hill slope

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 3Nov2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model 89912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:00 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | [redacted] | Compound | Oxybenzone |

| Oxybenzone Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 123100 | 2950 | 106650 | 105200 | 109300 | 114450 | 101900 | 146100 | 175600 | 102700 | 33850 | with 1nM DHT |
| B | 0 | 153050 | 3000 | 164000 | 146650 | 132800 | 180400 | 152000 | 207350 | 221900 | 129850 | 57400 | with 1nM DHT |
| C | 100 | 176750 | 3750 | 153450 | 157900 | 168800 | 220000 | 190600 | 248500 | 188200 | 124800 | 51950 | with 1nM DHT |
| D | 0 | 202100 | 3700 | 177800 | 175900 | 171700 | 203500 | 168500 | 204900 | 157550 | 101200 | 43850 | with 1nM DHT |
| E | *0* | *241600* | *193950* | *215200* | *196450* | *238000* | *225450* | *303900* | *357450* | *369850* | *317700* | *412400* | with 1000nM DHT |
| F | *0* | *175350* | *173100* | *181800* | *183600* | *193850* | *236950* | *223650* | *237250* | *337600* | *335900* | *348200* | with 1000nM DHT |
| G | *0* | *160450* | *170550* | *120250* | *132900* | *103400* | *108700* | *99900* | *113500* | *156250* | *268100* | *297400* | with 1000nM DHT |
| H | *0* | *173250* | *136200* | *126000* | *175450* | *107450* | *123600* | *114450* | *162850* | *147050* | *249750* | *257950* | with 1000nM DHT |
| | | | | | | | | | | | | | Fold Induction (1nM DHT) |
| Mean | 38 | 163750 | 3350 | 150475 | 146413 | 145650 | 179588 | 153250 | 201713 | 185813 | 114638 | 46763 | |
| Std Dev | 48 | 33698 | 434 | 30871 | 30000 | 30005 | 46363 | 37709 | 42126 | 27148 | 14807 | 10252 | |
| SEM | 24 | 16849 | 217 | 15436 | 15000 | 15003 | 23181 | 18855 | 21063 | 13574 | 7404 | 5126 | |
| CV% | *127.7* | *20.6* | *13.0* | *20.5* | *20.5* | *20.6* | *25.8* | *24.6* | *20.9* | *14.6* | *12.9* | *21.9* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 0.9 | 0.9 | 1.1 | 0.9 | 1.2 | 1.1 | 0.7 | 0.3 | Fold Induction (1000nM |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 0 | 187663 | 173450 | 161313 | 169425 | 161175 | 173725 | 185475 | 222763 | 252688 | 292863 | 328988 | |
| Std Dev | 0 | 36556 | 15560 | 45164 | 32649 | 65744 | 66817 | 96349 | 103089 | 117469 | 40583 | 66760 | |
| SEM | 0 | 18278 | 7780 | 22582 | 16324 | 32872 | 33409 | 48175 | 51544 | 58734 | 20292 | 33380 | |
| CV% | | *19.5* | *9.0* | *28.0* | *19.3* | *40.8* | *38.5* | *51.9* | *46.3* | *46.5* | *13.9* | *20.3* | |

Mean VC 3350 Mean DHT 1000nM Control 173450

**Subtraction of VC from wells**

| Oxybenzone Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -3300 | 119750 | -400 | 103300 | 101850 | 105950 | 111100 | 98550 | 142750 | 172250 | 99350 | 30500 | with 1nM DHT |
| B | -3350 | 149700 | -350 | 160650 | 143300 | 129450 | 177050 | 148650 | 204000 | 218550 | 126500 | 54050 | with 1nM DHT |
| C | -3250 | 173400 | 400 | 150100 | 154550 | 165450 | 216650 | 187250 | 245150 | 184850 | 121450 | 48600 | with 1nM DHT |
| D | -3350 | 198750 | 350 | 174450 | 172550 | 168350 | 200150 | 165150 | 201550 | 154200 | 97850 | 40500 | with 1nM DHT |
| E | -3350 | 238250 | 190600 | 211850 | 193100 | 234650 | 222100 | 300550 | 354100 | 366500 | 314350 | 409050 | with 1000nM DHT |
| F | -3350 | 172000 | 169750 | 178450 | 180250 | 190500 | 233600 | 220300 | 233900 | 334250 | 332550 | 344850 | with 1000nM DHT |
| G | -3350 | 157100 | 167200 | 116900 | 118850 | 102050 | 105350 | 96550 | 110150 | 152900 | 264750 | 294050 | with 1000nM DHT |
| H | -3350 | 169900 | 152850 | 124650 | 172100 | 104100 | 120450 | 111100 | 179500 | 143700 | 246400 | 254600 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 164031

| Oxybenzone Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -3313 | 160400 | 0 | 147125 | 143063 | 142300 | 176238 | 149900 | 198363 | 182463 | 111288 | 43413 |
| Std Dev | 48 | 33698 | 434 | 30871 | 30000 | 30005 | 46363 | 37709 | 42126 | 27148 | 14807 | 10254 |
| SEM | 24 | 16849 | 217 | 15436 | 15000 | 15003 | 23181 | 18855 | 21063 | 13574 | 7404 | 5126 |
| CV% | *-1.4* | *21.0* | | *21.0* | *21.0* | *21.1* | *26.3* | *25.2* | *21.2* | *14.9* | *13.3* | *23.6* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 0.9 | 0.9 | 1.1 | 0.9 | 1.2 | 1.1 | 0.7 | 0.3 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))**

| Oxybenzone Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.2 | 81.4 | -0.3 | 70.2 | 69.2 | 72.0 | 75.5 | 67.0 | 97.0 | 117.1 | 67.5 | 20.7 | with 1nM DHT |
| B | -2.3 | 101.8 | -0.2 | 109.2 | 97.4 | 88.0 | 120.3 | 101.0 | 138.7 | 148.5 | 86.0 | 36.7 | with 1nM DHT |
| C | -2.2 | 117.9 | 0.3 | 102.0 | 105.0 | 112.5 | 147.3 | 127.3 | 166.6 | 125.6 | 82.5 | 33.0 | with 1nM DHT |
| D | -2.3 | 135.1 | 0.2 | 118.6 | 117.3 | 114.4 | 136.0 | 112.3 | 137.0 | 104.8 | 66.5 | 27.5 | with 1nM DHT |
| E | -2.0 | 145.2 | 116.2 | 129.2 | 117.7 | 143.1 | 135.4 | 183.2 | 215.9 | 223.4 | 191.6 | 249.4 | with 1000nM DHT |
| F | -2.0 | 104.9 | 103.5 | 108.8 | 109.9 | 116.1 | 142.4 | 134.3 | 142.6 | 203.8 | 202.7 | 210.2 | with 1000nM DHT |
| G | -2.0 | 95.8 | 101.9 | 71.3 | 72.5 | 62.2 | 64.2 | 58.9 | 67.2 | 93.2 | 161.4 | 179.3 | with 1000nM DHT |
| H | -2.0 | 103.5 | 93.2 | 76.0 | 104.9 | 63.5 | 73.4 | 67.7 | 109.4 | 87.6 | 150.2 | 155.3 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

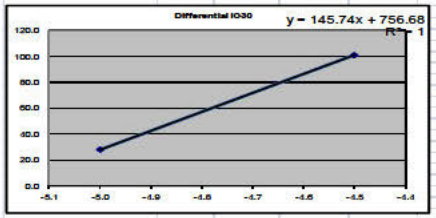
| Oxybenzone Antag | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.3 | | 0.0 | 100.0 | 97.2 | 96.7 | 119.8 | 101.9 | 134.8 | 124.0 | 75.6 | 29.5 |
| Std Dev | 0.0 | | 0.3 | 21.0 | 20.4 | 20.4 | 31.5 | 25.6 | 28.6 | 18.5 | 10.1 | 7.0 |
| SEM | 0.0 | | 0.1 | 10.5 | 10.2 | 10.2 | 15.8 | 12.8 | 14.3 | 9.2 | 5.0 | 3.5 |

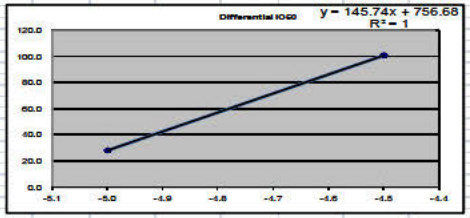
**High Agonist control, % of Maximal Induction Control (Average)**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.0 | | 103.7 | 96.3 | 101.2 | 96.2 | 103.9 | 111.0 | 133.8 | 152.0 | 176.5 | 198.5 |
| Std Dev | 0.0 | | 9.5 | 27.5 | 19.9 | 40.1 | 40.7 | 58.7 | 62.8 | 71.6 | 24.7 | 40.7 |
| SEM | 0.0 | | 4.7 | 13.8 | 10.0 | 20.0 | 20.4 | 29.4 | 31.4 | 35.8 | 12.4 | 20.3 |

| Oxybenzone Antag | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.2 | #VALUE! | 103.7 | -3.7 | 4.0 | -0.9 | -15.9 | 9.1 | -1.1 | 28.0 | 100.9 | 169.0 |

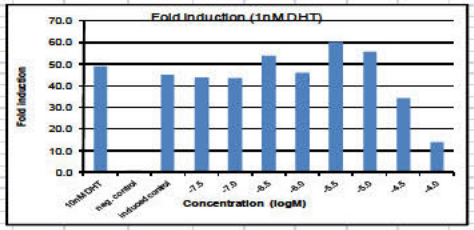
| | -5.0 | -4.5 | | | -5.0 | -4.5 | | Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Differential IC30 | 28.0 | 100.9 | Differential IC50 | | 28.0 | 100.9 | | 100.0 | 29.5 | 70.5 |
| | -5.0 | | | | -4.8 | | | | | |

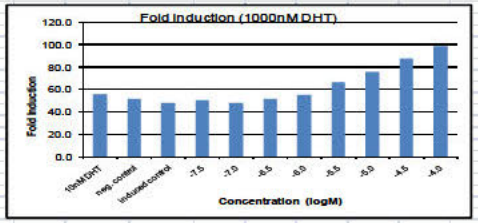



**FOLD INDUCTION**

| | 10nM DH | neg. control | Induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 36.7 | 0.9 | 31.8 | 31.4 | 32.6 | 34.2 | 30.4 | 43.6 | 52.4 | 30.7 | 10.1 |
| | 45.7 | 0.9 | 49.0 | 43.6 | 39.6 | 53.9 | 45.4 | 61.9 | 66.2 | 38.8 | 17.1 |
| | 52.8 | 1.1 | 45.8 | 47.1 | 50.4 | 65.7 | 56.9 | 74.2 | 56.2 | 37.3 | 15.5 |
| | 60.3 | 1.1 | 53.1 | 52.5 | 51.3 | 60.7 | 50.3 | 61.2 | 47.0 | 30.2 | 13.1 |
| | 72.1 | 57.9 | 64.2 | 58.6 | 71.0 | 67.3 | 90.7 | 106.7 | 110.4 | 54.8 | 123.1 |
| | 52.3 | 51.7 | 54.3 | 54.8 | 57.9 | 70.7 | 66.8 | 70.8 | 100.8 | 100.3 | 103.9 |
| | 47.9 | 50.9 | 35.9 | 36.5 | 31.5 | 32.4 | 29.8 | 33.9 | 46.5 | 80.0 | 88.8 |
| | 51.7 | 46.6 | 38.2 | 52.4 | 32.1 | 37.0 | 34.2 | 54.6 | 43.9 | 74.6 | 77.0 |
| Mean | 48.9 | 1.0 | 44.9 | 43.7 | 43.5 | 53.6 | 45.7 | 60.2 | 55.5 | 34.2 | 14.0 |
| Std Dev | 10.1 | 0.1 | 9.2 | 9.0 | 9.0 | 13.8 | 11.3 | 12.6 | 8.1 | 4.4 | 3.1 |
| SEM | 5.0 | 0.1 | 4.6 | 4.5 | 4.5 | 6.9 | 5.6 | 6.3 | 4.1 | 2.2 | 1.5 |
| CV% | *20.6* | *13.0* | *20.5* | *20.5* | *20.6* | *25.8* | *24.6* | *20.9* | *14.6* | *12.9* | *21.9* |
| Relative Trar | 100 | 2.0 | 91.9 | 89.4 | 88.9 | 109.7 | 93.6 | 123.2 | 113.5 | 70.0 | 28.6 |
| Mean | 56.0 | 51.8 | 48.2 | 50.6 | 48.1 | 51.9 | 55.4 | 66.5 | 75.4 | 87.4 | 98.2 |
| Std Dev | 10.9 | 4.6 | 13.5 | 9.7 | 19.6 | 19.9 | 28.8 | 30.8 | 35.1 | 12.1 | 19.9 |
| SEM | 5.5 | 2.3 | 6.7 | 4.9 | 9.8 | 10.0 | 14.4 | 15.4 | 17.5 | 6.1 | 10.0 |
| CV% | *19.5* | *9.0* | *28.0* | *19.3* | *40.8* | *38.5* | *51.9* | *46.3* | *46.5* | *13.9* | *20.3* |
| Relative Trar | 100 | 92.4 | 86.0 | 90.3 | 85.9 | 92.6 | 98.8 | 118.7 | 134.6 | 156.1 | 175.3 |

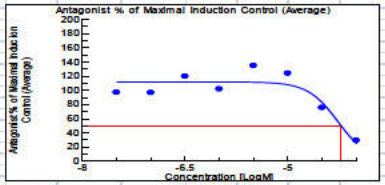



**Viability (% Control)**

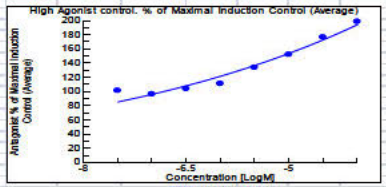
| Oxybenzone Antag | 10nM DHT | neg. cont | Induced | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 78 | 100 | 113 | 116 | 107 | 120 | 121 | 116 | 121 | 124 | 97 |
| StdDev | 23 | 18 | 2 | 3 | 29 | 12 | 8 | 12 | 9 | 7 | 18 |
| SEM | 9 | 7 | 1 | 1 | 12 | 5 | 3 | 5 | 4 | 3 | 8 |
| %CV | 29.1 | 17.8 | 2.1 | 2.2 | 27.6 | 10.0 | 6.8 | 10.6 | 7.1 | 5.5 | 19.0 |

Fit Chart -4.2 #Ok




0 Bottom
112.4 Top
-4.3 EC50
-2.0 Hill slope

Fit Chart -7.5 #Ok




0 Bottom
7573.3 Top
11.2 EC50
0.1 Hill slope

# Data Spreadsheets



| | | | | |
|---|---|---|---|---|
| Experiment date: | 13oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: | 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry | |
| 11/11/11 15:00 | | Study Number: | 9070-100107 | |
| Assay Conducted by: | [redacted] | Compound | DHT | |

| DHT ag | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 100 | 1516300 | 32550 | 25850 | 57150 | 60000 | 175850 | 430150 | 1215250 | 1532650 | 2007450 | 1327050 | |
| B | 0 | 1578800 | 31800 | 29850 | 63150 | 77600 | 185750 | 473250 | 1492800 | 1646800 | 1740900 | 1407150 | |
| C | 0 | 1603000 | 35900 | 34200 | 69400 | 83150 | 204750 | 467000 | 1221350 | 1680950 | 2034100 | 1551700 | |
| D | 0 | 1775150 | 34650 | 35850 | 65800 | 74550 | 198550 | 536600 | 1394200 | 1635950 | 1882100 | 1490150 | |
| E | 100 | 1864100 | 34850 | 29150 | 56850 | 79900 | 194250 | 495550 | 1461800 | 1590650 | 1807150 | 1596950 | |
| F | 0 | 1631100 | 27800 | 28550 | 60750 | 82900 | 173800 | 421500 | 1172850 | 1451200 | 1639250 | 1332000 | |
| G | *100* | *744450* | *100450* | *41450* | *48850* | *76850* | *147900* | *143550* | *172500* | *273050* | *334500* | *723100* | with 10μM Nilutamide |
| H | *0* | *552450* | *33050* | *30650* | *35700* | *41700* | *45550* | *47850* | *73100* | *110950* | *108950* | *480200* | with 10μM Nilutamide |
| Mean | 33 | 1661408 | 31750 | | 62183 | 76350 | 188825 | 470675 | 1326375 | 1589700 | 1851825 | 1450833 | |
| Std Dev | 52 | 131325 | 3434 | | 4938 | 8647 | 12499 | 42533 | 139704 | 85046 | 153524 | 113509 | |
| SEM | 21 | 53613 | 991 | | 2016 | 3530 | 5103 | 17364 | 57034 | 34720 | 62676 | 46340 | |
| CV% | *154.9* | *7.9* | *10.82* | | *7.9* | *11.3* | *6.6* | *9.0* | *10.5* | *5.3* | *8.3* | *7.8* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.1 | 0.3 | 0.8 | 1.0 | 1.1 | 0.9 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 50 | 648450 | 52900 | | 42275 | 59275 | 96725 | 95700 | 122800 | 192000 | 251725 | 601650 | |
| Std Dev | 71 | 135765 | 31886 | | 9298 | 24855 | 72372 | 67670 | 70286 | 114622 | 117062 | 171756 | |

Mean VC 31750 Mean Nilutamide Control 52900

**Subtraction of VC from wells**

| DHT ag | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 100 | 1484550 | 800 | -5900 | 25400 | 28250 | 144100 | 398400 | 1183500 | 1500900 | 1975700 | 1295300 | |
| B | 0 | 1547050 | 50 | -1900 | 31400 | 45850 | 154000 | 441500 | 1461050 | 1615050 | 1709150 | 1375400 | |
| C | 0 | 1571250 | 4150 | 2450 | 37650 | 51400 | 173000 | 435250 | 1189600 | 1649200 | 2002350 | 1519950 | |
| D | 0 | 1743400 | 2900 | 4100 | 34050 | 42800 | 166800 | 504850 | 1362450 | 1604200 | 1850350 | 1458400 | |
| E | 100 | 1832350 | 3100 | -2600 | 25100 | 48150 | 162500 | 463800 | 1430050 | 1558900 | 1775400 | 1565200 | |
| F | 0 | 1599350 | -3950 | -3200 | 29000 | 51150 | 142050 | 389750 | 1141100 | 1419450 | 1607500 | 1300250 | |
| G | 100 | 691550 | 47550 | -11450 | -4050 | 23950 | 95000 | 90650 | 119600 | 220150 | 281600 | 670200 | with 10μM Nilutamide |
| H | 0 | 499550 | -19850 | -16250 | -17200 | -11200 | -7350 | -5050 | 20200 | 58050 | 116050 | 427300 | with 10μM Nilutamide |

**Corrected Data Means**

| DHT ag | blank | 10nM DHT | neg. control | | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 33 | 1629658 | 0 | | 30433 | 44600 | 157075 | 438925 | 1294625 | 1557950 | 1820075 | 1419083 |
| Std Dev | 52 | 131325 | 3434 | | 4938 | 8647 | 12499 | 42533 | 139704 | 85046 | 153524 | 113509 |
| SEM | 21 | 53613 | 991 | | 2016 | 3530 | 5103 | 17364 | 57034 | 34720 | 62676 | 46340 |
| CV% | *154.9* | *8.1* | | | *16.2* | *19.4* | *8.0* | *9.7* | *10.8* | *5.5* | *8.4* | *8.0* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.1 | 0.3 | 0.8 | 1.0 | 1.1 | 0.9 |

**Agonist: % of Maximal Induction Control**

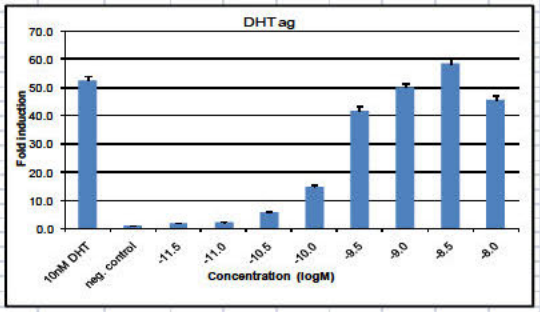
| DHT ag | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 91.1 | 0.0 | -0.4 | 1.6 | 1.7 | 8.8 | 24.4 | 72.6 | 92.1 | 121.2 | 79.5 | |
| B | 0.0 | 94.9 | 0.0 | -0.1 | 1.9 | 2.8 | 9.4 | 27.1 | 89.7 | 99.1 | 104.9 | 84.4 | |
| C | 0.0 | 96.4 | 0.3 | 0.2 | 2.3 | 3.2 | 10.6 | 26.7 | 73.0 | 101.2 | 122.9 | 93.3 | |
| D | 0.0 | 107.0 | 0.2 | 0.3 | 2.1 | 2.6 | 10.2 | 31.0 | 83.6 | 98.4 | 113.5 | 89.5 | |
| E | 0.0 | 112.4 | 0.2 | -0.2 | 1.5 | 3.0 | 10.0 | 28.5 | 87.8 | 95.7 | 108.9 | 96.0 | |
| F | 0.0 | 98.1 | -0.2 | -0.2 | 1.8 | 3.1 | 8.7 | 23.9 | 70.0 | 87.1 | 98.6 | 79.8 | |
| G | 0.0 | 42.4 | 2.9 | -0.7 | -0.2 | 1.5 | 5.8 | 5.6 | 7.3 | 13.5 | 17.3 | 41.1 | with 10μM Nilutamide |
| H | 0.0 | 30.7 | -1.2 | -1.0 | -1.1 | -0.7 | -0.5 | -0.3 | 1.2 | 3.6 | 7.1 | 26.2 | with 10μM Nilutamide |

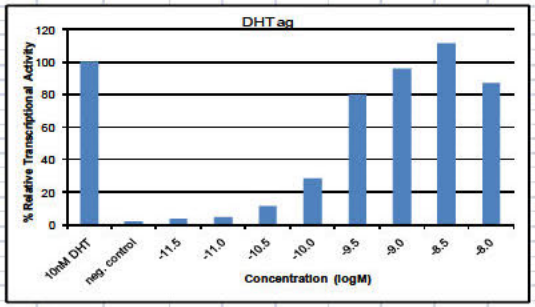
**% of Maximal Induction Control**

| DHT ag | blank | 10nM DHT | neg. control | | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 1.9 | 2.7 | 9.6 | 26.9 | 79.4 | 95.6 | 111.7 | 87.1 |
| Std Dev | 0.0 | 8.1 | 0.2 | | 0.3 | 0.5 | 0.8 | 2.6 | 8.6 | 5.2 | 9.4 | 7.0 |
| SEM | 0.0 | 3.3 | 0.1 | | 0.1 | 0.2 | 0.3 | 1.1 | 3.5 | 2.1 | 3.8 | 2.8 |

**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 47.8 | 1.0 | 0.8 | 1.8 | 1.9 | 5.5 | 13.5 | 38.3 | 48.3 | 63.2 | 41.8 | |
| | 49.7 | 1.0 | 0.9 | 2.0 | 2.4 | 5.9 | 14.9 | 47.0 | 51.9 | 54.8 | 44.3 | |
| | 50.5 | 1.1 | 1.1 | 2.2 | 2.6 | 6.4 | 14.7 | 38.5 | 52.9 | 64.1 | 48.9 | |
| | 55.9 | 1.1 | 1.1 | 2.1 | 2.3 | 6.3 | 16.9 | 43.9 | 51.5 | 59.3 | 46.9 | |
| | 58.7 | 1.1 | 0.9 | 1.8 | 2.5 | 6.1 | 15.6 | 46.0 | 50.1 | 56.9 | 50.3 | |
| | 51.4 | 0.9 | 0.9 | 1.9 | 2.6 | 5.5 | 13.3 | 36.9 | 45.7 | 51.6 | 42.0 | |
| Mean | 52.3 | 1.0 | | 2.0 | 2.4 | 5.9 | 14.8 | 41.8 | 50.1 | 58.3 | 45.7 | |
| Std Dev | 4.1 | 0.1 | | 0.2 | 0.3 | 0.4 | 1.3 | 4.4 | 2.7 | 4.8 | 3.6 | |
| SEM | 1.7 | 0.0 | | 0.1 | 0.1 | 0.2 | 0.5 | 1.8 | 1.1 | 2.0 | 1.5 | |
| CV% | *7.9* | *10.8* | | *7.9* | *11.3* | *6.6* | *9.0* | *10.5* | *5.3* | *8.3* | *7.8* | |
| Relative Tran | 100 | 1.9 | | 3.7 | 4.6 | 11.4 | 28.3 | 79.8 | 95.7 | 111.5 | 87.3 | |



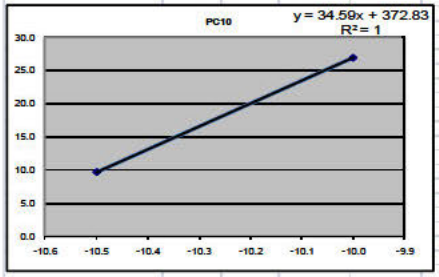



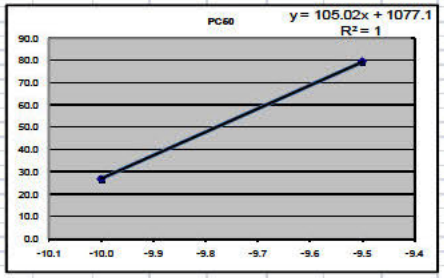

**Viability (% Control)**

| DHT ag | 10nM DHT | neg. con | neg. con | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 101 | 100 | 96 | 100 | 101 | 102 | 104 | 101 | 101 | 101 | 96 |
| StdDev | 2 | 5 | 5 | 3 | 3 | 5 | 6 | 5 | 3 | 5 | 5 |
| SEM | 1 | 2 | 2 | 1 | 1 | 2 | 3 | 2 | 1 | 2 | 2 |
| %CV | 2.3 | 5.2 | 5.2 | 3.3 | 3.1 | 4.9 | 6.1 | 5.0 | 3.3 | 5.0 | 5.4 |

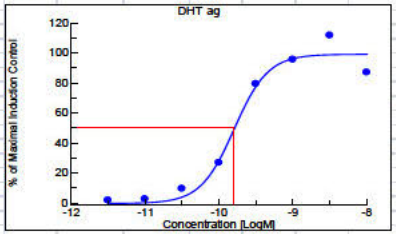
| | -10.5 | -10.0 |
|---|---|---|
| PC10 | 9.6 | 26.9 |
| | -10.5 | |

| | -10.0 | -9.5 |
|---|---|---|
| PC50 | 26.9 | 79.4 |
| | -9.8 | |




| | |
|---|---|
| Fit | -9.8 |
| Chart | #Ok |




| | |
|---|---|
| 0 | Bottom |
| 99.4 | Top |
| -9.8 | EC50 |
| 1.9 | Hill slope |

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 13Oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V. Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:00 | | Study Number: 9070-100107ARTA | |
| Assay Conducted by: | [redacted] | Compound DHT | |

| DHT ant | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 1136700 | 22800 | 750400 | 1277950 | 936400 | 1186000 | 1058300 | 1332200 | 1191750 | 1388850 | 1377350 | with 1nM DHT |
| B | 50 | 1063700 | 26200 | 872750 | 1073300 | 1044850 | 1230950 | 1128450 | 1228550 | 1582250 | 1325600 | 1252750 | with 1nM DHT |
| C | 50 | 970900 | 23800 | 934650 | 1289150 | 988350 | 1408550 | 858850 | 1549450 | 1689350 | 1563950 | 1358700 | with 1nM DHT |
| D | 50 | 981650 | 23450 | 1003100 | 1392400 | 873000 | 1130450 | 1050000 | 1147350 | 1288700 | 1349850 | 1385700 | with 1nM DHT |
| E | 150 | 911300 | 1021200 | 992900 | 1206750 | 1212200 | 1204000 | 1138400 | 1312800 | 1303050 | 1443700 | 1209900 | with 1000nM DHT |
| F | 50 | 1106000 | 985000 | 1034500 | 1383100 | 1113700 | 1380750 | 1097850 | 1440250 | 1314050 | 1351700 | 1336700 | with 1000nM DHT |
| G | 0 | 1065150 | 1000900 | 983350 | 1142300 | 1143650 | 1293300 | 1130650 | 1260750 | 1364250 | 1266050 | 1152950 | with 1000nM DHT |
| H | 0 | 1075950 | 932150 | 1034950 | 1244300 | 1097600 | 1083950 | 1092850 | 1323100 | 1271400 | 1267200 | 1035650 | with 1000nM DHT |
| Mean | 38 | 1038238 | 24563 | 890225 | 1258200 | 960650 | 1238988 | 1023900 | 1314388 | 1438013 | 1407063 | 1343625 | |
| Std Dev | 25 | 77631 | 2460 | 107348 | 133598 | 73320 | 120283 | 115523 | 174013 | 235877 | 107788 | 61626 | |
| SEM | 13 | 38815 | 1230 | 53674 | 66799 | 36660 | 60142 | 57762 | 87006 | 117939 | 53894 | 30813 | |
| CV% | 66.7 | 7.5 | 10.0 | 12.1 | 10.6 | 7.6 | 9.7 | 11.3 | 13.2 | 16.4 | 7.7 | 4.6 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.2 | 0.9 | 1.2 | 1.0 | 1.3 | 1.4 | 1.4 | 1.3 | |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 50 | 1044600 | 989788 | 1011388 | 1239113 | 1141788 | 1236500 | 1121925 | 1334213 | 1313263 | 1333388 | 1211350 | |
| Std Dev | 71 | 89751 | 29141 | 27238 | 92772 | 50672 | 134671 | 31895 | 75785 | 38677 | 84622 | 130563 | |
| SEM | 35 | 44876 | 14570 | 13619 | 46386 | 25336 | 67336 | 15947 | 37892 | 19339 | 42311 | 65284 | |
| CV% | 141.4 | 8.6 | 2.9 | 2.7 | 7.5 | 4.4 | 10.9 | 2.8 | 5.7 | 2.9 | 6.3 | 10.8 | |

Mean VC 24563 Mean DHT 1000nM Control 989788

**Subtraction of VC from wells**

| DHT ant | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -24563 | 1112138 | -1763 | 725838 | 1253388 | 911838 | 1161438 | 1033738 | 1307638 | 1167188 | 1364288 | 1352788 | with 1nM DHT |
| B | -24513 | 1039138 | 3638 | 848188 | 1048738 | 1020288 | 1206388 | 1103888 | 1203988 | 1557688 | 1301038 | 1228188 | with 1nM DHT |
| C | -24513 | 946338 | -763 | 910088 | 1264588 | 963788 | 1383988 | 834288 | 1524888 | 1664788 | 1539388 | 1334138 | with 1nM DHT |
| D | -24513 | 957088 | -1113 | 978538 | 1367838 | 848438 | 1105888 | 1025438 | 1122788 | 1264138 | 1325288 | 1361138 | with 1nM DHT |
| E | -24413 | 886738 | 996638 | 968338 | 1182188 | 1187638 | 1179438 | 1113838 | 1286238 | 1276488 | 1421138 | 1275338 | with 1000nM DHT |
| F | -24513 | 1081438 | 960438 | 1009938 | 1338538 | 1089138 | 1356188 | 1073288 | 1415688 | 1289488 | 1327138 | 1312138 | with 1000nM DHT |
| G | -24563 | 1060588 | 976238 | 958638 | 1117738 | 1119088 | 1270738 | 1114238 | 1236138 | 1339988 | 1244388 | 1128388 | with 1000nM DHT |
| H | -24563 | 1051388 | 927588 | 1010388 | 1219738 | 1073038 | 1041388 | 1068088 | 1298538 | 1246838 | 1242638 | 1031288 | with 1000nM DHT |

VC Corrected Data Means AVG cntrl 976025

| DHT ant | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -24525 | 1013675 | 0 | 865663 | 1233638 | 936088 | 1214425 | 999338 | 1289825 | 1413450 | 1382500 | 1319063 |
| Std Dev | 25 | 77631 | 2460 | 107348 | 133598 | 73320 | 120283 | 115523 | 174013 | 235877 | 107788 | 61626 |
| SEM | 13 | 38815 | 1230 | 53674 | 66799 | 36660 | 60142 | 57762 | 87006 | 117939 | 53894 | 30813 |
| CV% | -0.1 | 7.7 | | 12.4 | 10.8 | 7.8 | 9.9 | 11.6 | 13.5 | 16.7 | 7.8 | 4.7 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.2 | 0.9 | 1.2 | 1.0 | 1.3 | 1.4 | 1.4 | 1.3 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))**

| DHT ant | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.8 | 128.5 | -0.2 | 83.8 | 144.8 | 105.3 | 134.2 | 119.4 | 151.1 | 134.8 | 157.6 | 156.3 | with 1nM DHT |
| B | -2.8 | 120.0 | 0.4 | 98.0 | 121.1 | 117.9 | 139.4 | 127.5 | 139.1 | 179.9 | 150.3 | 141.9 | with 1nM DHT |
| C | -2.8 | 109.3 | -0.1 | 105.1 | 146.1 | 111.3 | 159.9 | 96.4 | 176.2 | 192.3 | 177.8 | 154.1 | with 1nM DHT |
| D | -2.8 | 110.6 | -0.1 | 113.0 | 158.0 | 98.0 | 127.8 | 118.5 | 129.7 | 146.0 | 153.1 | 157.2 | with 1nM DHT |
| E | -2.5 | 90.9 | 102.1 | 99.2 | 121.1 | 121.7 | 120.8 | 116.2 | 132.0 | 131.0 | 145.6 | 130.7 | with 1000nM DHT |
| F | -2.5 | 110.8 | 98.4 | 103.5 | 137.1 | 111.6 | 139.0 | 110.0 | 145.0 | 132.1 | 136.0 | 134.4 | with 1000nM DHT |
| G | -2.5 | 108.7 | 100.0 | 98.2 | 114.5 | 114.7 | 130.2 | 114.2 | 126.7 | 137.3 | 127.5 | 115.6 | with 1000nM DHT |
| H | -2.5 | 107.1 | 95.9 | 103.5 | 125.0 | 109.9 | 106.7 | 109.4 | 133.0 | 127.7 | 127.3 | 105.7 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| DHT ant | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.8 | 117.1 | 0.0 | 100.0 | 142.5 | 108.1 | 140.3 | 115.4 | 149.0 | 163.3 | 159.7 | 152.4 |
| Std Dev | 0.0 | 9.0 | 0.3 | 12.4 | 15.4 | 8.5 | 13.9 | 13.3 | 20.1 | 27.2 | 12.5 | 7.1 |
| SEM | 0.0 | 4.5 | 0.1 | 6.2 | 7.7 | 4.2 | 6.9 | 6.7 | 10.1 | 13.6 | 6.2 | 3.6 |

**High Agonist control, % of Maximal Induction Control (Average)**

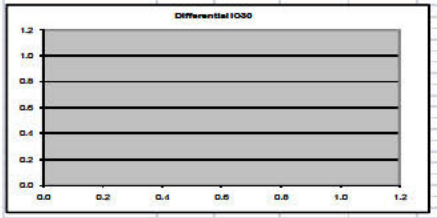
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.5 | 104.5 | 98.9 | 101.1 | 124.4 | 114.5 | 124.2 | 112.4 | 134.2 | 132.0 | 134.1 | 121.6 |
| Std Dev | 0.0 | 9.2 | 3.0 | 2.8 | 9.5 | 5.2 | 13.8 | 3.3 | 7.8 | 4.0 | 8.7 | 13.4 |
| SEM | 0.0 | 4.6 | 1.5 | 1.4 | 4.8 | 2.6 | 6.9 | 1.6 | 3.9 | 2.0 | 4.3 | 6.7 |

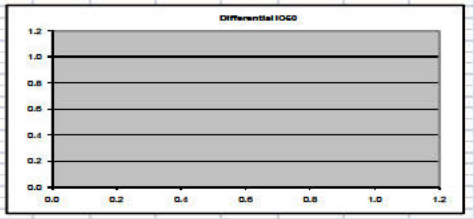
| DHT ant | | | | | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.3 | -12.6 | 98.9 | 1.1 | -18.1 | 6.3 | -16.1 | -3.0 | -14.8 | -31.2 | -25.6 | -30.8 |

Differential IC30 Differential IC60

Relative Inhibitory Concentration Max (RICMax)

100.0 NA #VALUE!




**FOLD INDUCTION**

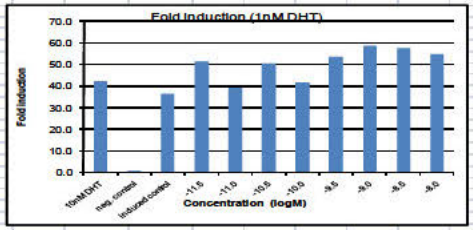
| | 10nM DH | neg. control | induced cor | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 46.3 | 0.9 | 30.6 | 52.0 | 38.1 | 48.3 | 43.1 | 54.2 | 48.5 | 56.5 | 56.1 | with 1nM DHT |
| | 43.3 | 1.1 | 35.5 | 43.7 | 42.5 | 50.1 | 45.9 | 50.0 | 64.4 | 54.0 | 51.0 | with 1nM DHT |
| | 39.5 | 1.0 | 38.1 | 52.5 | 40.2 | 57.3 | 35.0 | 63.1 | 68.8 | 63.7 | 55.3 | with 1nM DHT |
| | 40.0 | 1.0 | 40.8 | 56.7 | 35.5 | 46.0 | 42.7 | 46.7 | 52.5 | 55.0 | 56.4 | with 1nM DHT |
| | 37.1 | 41.6 | 40.4 | 49.1 | 49.4 | 49.0 | 47.2 | 53.4 | 53.1 | 58.9 | 52.5 | with 1000nM DHT |
| | 45.0 | 40.1 | 42.1 | 55.5 | 45.3 | 56.2 | 44.7 | 58.6 | 53.5 | 55.0 | 54.4 | with 1000nM DHT |
| | 44.2 | 40.7 | 40.0 | 46.5 | 46.5 | 52.7 | 46.4 | 51.3 | 55.6 | 51.7 | 46.5 | with 1000nM DHT |
| | 43.8 | 38.8 | 42.1 | 50.7 | 44.7 | 43.4 | 44.5 | 53.9 | 51.8 | 51.6 | 43.0 | with 1000nM DHT |

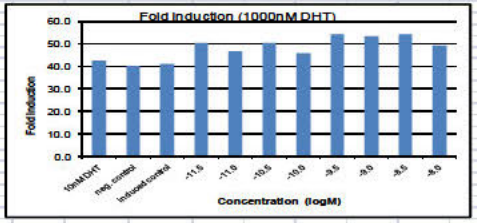
Fold Induction (1nM DH

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 42.3 | 1.0 | 36.2 | 51.2 | 39.1 | 50.4 | 41.7 | 53.5 | 58.5 | 57.3 | 54.7 | |
| Std Dev | 3.2 | 0.1 | 4.4 | 5.4 | 3.0 | 4.9 | 4.7 | 7.1 | 9.6 | 4.4 | 2.5 | |
| SEM | 1.6 | 0.1 | 2.2 | 2.7 | 1.5 | 2.4 | 2.4 | 3.5 | 4.8 | 2.2 | 1.3 | |
| CV% | 7.5 | 10.0 | 12.1 | 10.6 | 7.6 | 9.7 | 11.3 | 13.2 | 16.4 | 7.7 | 4.6 | |
| Relative Tran | 100 | 2.4 | 85.7 | 121.2 | 92.5 | 119.3 | 98.6 | 126.6 | 138.5 | 135.5 | 129.4 | |

Fold Induction (1000nM

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 42.5 | 40.3 | 41.2 | 50.4 | 46.5 | 50.3 | 45.7 | 54.3 | 53.5 | 54.3 | 49.3 | |
| Std Dev | 3.7 | 1.2 | 1.1 | 3.8 | 2.1 | 5.5 | 1.3 | 3.1 | 1.6 | 3.4 | 5.3 | |
| SEM | 1.8 | 0.6 | 0.6 | 1.9 | 1.0 | 2.7 | 0.6 | 1.5 | 0.8 | 1.7 | 2.7 | |
| CV% | 8.6 | 2.9 | 2.7 | 7.5 | 4.4 | 10.9 | 2.8 | 5.7 | 2.9 | 6.3 | 10.8 | |
| Relative Tran | 100 | 94.8 | 96.8 | 118.6 | 109.3 | 118.4 | 107.4 | 127.7 | 125.7 | 127.6 | 116.0 | |

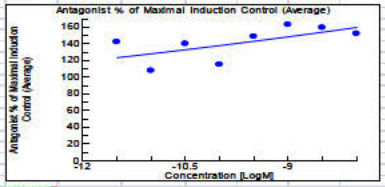



**Viability (% Control)**

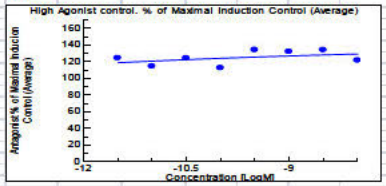
| DHT ant | 10nM DHT | neg. con | induced | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 101 | 100 | 96 | 100 | 101 | 102 | 104 | 101 | 101 | 101 | 96 |
| StdDev | 2 | 5 | 5 | 3 | 3 | 5 | 6 | 5 | 3 | 5 | 5 |
| SEM | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 2 |
| %CV | 2.3 | 5.2 | 5.2 | 3.3 | 3.1 | 4.9 | 6.1 | 5.0 | 3.3 | 5.0 | 5.4 |

Fit <-11.5
Chart #Ok




0 Bottom
1539.0 Top
18.7 EC50
0.0 Hill slope

Fit <-11.5
Chart #Ok




0 Bottom
139.5 Top
-19.2 EC50
0.1 Hill slope

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 20Oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:00 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | [redacted] | Compound | DHT |

| DHT | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 755950 | 11550 | 12450 | 15900 | 22050 | 48900 | 194350 | 533600 | 821000 | 678900 | 717450 | |
| B | 0 | 662600 | 12550 | 10550 | 18550 | 20750 | 49400 | 213150 | 567300 | 821200 | 885250 | 740450 | |
| C | 50 | 668400 | 12250 | 12800 | 16550 | 24100 | 67550 | 181100 | 638850 | 743850 | 809850 | 802750 | |
| D | 0 | 658750 | 13200 | 12200 | 17400 | 18450 | 53300 | 223900 | 500200 | 622000 | 752450 | 756350 | |
| E | 150 | 635600 | 13500 | 11450 | 19000 | 19600 | 59150 | 248400 | 549700 | 680400 | 777500 | 826500 | |
| F | 0 | 716950 | 13200 | 9500 | 18250 | 21600 | 58750 | 196100 | 575350 | 702300 | 821300 | 810400 | |
| G | *50* | *327250* | *16950* | *57150* | *70100* | *14100* | *58550* | *59400* | *24800* | *100950* | *166300* | *419200* | with 10μM Nilutamide |
| H | *150* | *258200* | *16800* | *19600* | *19300* | *14800* | *19350* | *21300* | *27450* | *42450* | *74450* | *254750* | with 10μM Nilutamide |
| Mean | 33 | 683042 | 12100 | | 17608 | 21125 | 56175 | 209500 | 560833 | 731792 | 787542 | 775650 | |
| Std Dev | 61 | 44583 | 1172 | | 1210 | 1989 | 7099 | 24288 | 46650 | 79577 | 69742 | 43650 | |
| SEM | 25 | 18201 | 338 | | 494 | 812 | 2898 | 9916 | 19045 | 32487 | 28472 | 17820 | |
| CV% | *181.7* | *6.5* | *9.60* | | *6.9* | *9.4* | *12.6* | *11.6* | *8.3* | *10.9* | *8.9* | *5.6* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.1 | 0.3 | 0.8 | 1.1 | 1.2 | 1.1 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 100 | 292725 | 27625 | | 44700 | 14450 | 38950 | 40350 | 26125 | 71700 | 120375 | 336975 | |
| Std Dev | 71 | 48826 | 19725 | | 35921 | 495 | 27719 | 26941 | 1874 | 41366 | 64948 | 116284 | |

Mean VC 12100 Mean Nilutamide Control 27625

**Subtraction of VC from wells**

| DHT | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 743850 | -550 | 350 | 3800 | 9950 | 36800 | 182250 | 521500 | 808900 | 666800 | 705350 | |
| B | 0 | 650500 | 450 | -1550 | 6450 | 8650 | 37300 | 201050 | 555200 | 809100 | 873150 | 728350 | |
| C | 50 | 656300 | 150 | 700 | 4450 | 12000 | 55450 | 169000 | 626750 | 731750 | 797750 | 790650 | |
| D | 0 | 646650 | 1100 | 100 | 5300 | 6350 | 41200 | 211800 | 488100 | 609900 | 740350 | 744250 | |
| E | 150 | 623500 | 1400 | -650 | 6900 | 7500 | 47050 | 236300 | 537600 | 668300 | 765400 | 814400 | |
| F | 0 | 704850 | 1100 | -2600 | 6150 | 9700 | 46650 | 184000 | 563250 | 690200 | 809200 | 798300 | |
| G | 50 | 299625 | -10675 | 29525 | 42475 | -13525 | 30925 | 31775 | -2825 | 73325 | 138675 | 391575 | with 10μM Nilutamide |
| H | 150 | 230575 | -10825 | -8025 | -8325 | -12825 | -8275 | -6325 | -175 | 14825 | 46825 | 227125 | with 10μM Nilutamide |

**Corrected Data Means**

| DHT | blank | 10nM DHT | neg. control | | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 33 | 670942 | 0 | | 5508 | 9025 | 44075 | 197400 | 548733 | 719692 | 775442 | 763550 |
| Std Dev | 61 | 44583 | 1172 | | 1210 | 1989 | 7099 | 24288 | 46650 | 79577 | 69742 | 43650 |
| SEM | 25 | 18201 | 338 | | 494 | 812 | 2898 | 9916 | 19045 | 32487 | 28472 | 17820 |
| CV% | *181.7* | *6.6* | | | *22.0* | *22.0* | *16.1* | *12.3* | *8.5* | *11.1* | *9.0* | *5.7* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.1 | 0.3 | 0.8 | 1.1 | 1.2 | 1.1 |

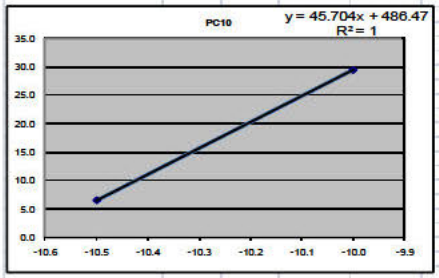
**Agonist: % of Maximal Induction Control**

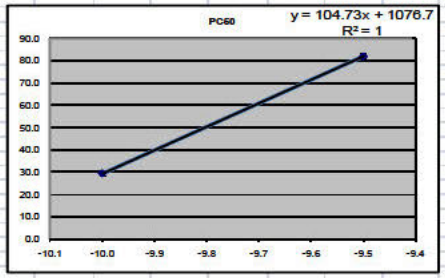
| DHT | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 110.9 | -0.1 | 0.1 | 0.6 | 1.5 | 5.5 | 27.2 | 77.7 | 120.6 | 99.4 | 105.1 | |
| B | 0.0 | 97.0 | 0.1 | -0.2 | 1.0 | 1.3 | 5.6 | 30.0 | 82.7 | 120.6 | 130.1 | 108.6 | |
| C | 0.0 | 97.8 | 0.0 | 0.1 | 0.7 | 1.8 | 8.3 | 25.2 | 93.4 | 109.1 | 118.9 | 117.8 | |
| D | 0.0 | 96.4 | 0.2 | 0.0 | 0.8 | 0.9 | 6.1 | 31.6 | 72.7 | 90.9 | 110.3 | 110.9 | |
| E | 0.0 | 92.9 | 0.2 | -0.1 | 1.0 | 1.1 | 7.0 | 35.2 | 80.1 | 99.6 | 114.1 | 121.4 | |
| F | 0.0 | 105.1 | 0.2 | -0.4 | 0.9 | 1.4 | 7.0 | 27.4 | 83.9 | 102.9 | 120.6 | 119.0 | |
| G | 0.0 | 44.7 | -1.6 | 4.4 | 6.3 | -2.0 | 4.6 | 4.7 | -0.4 | 10.9 | 20.7 | 58.4 | with 10μM Nilutamide |
| H | 0.0 | 34.4 | -1.6 | -1.2 | -1.2 | -1.9 | -1.2 | -0.9 | 0.0 | 2.2 | 7.0 | 33.9 | with 10μM Nilutamide |

**% of Maximal Induction Control**

| DHT | blank | 10nM DHT | neg. control | | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.8 | 1.3 | 6.6 | 29.4 | 81.8 | 107.3 | 115.6 | 113.8 |
| Std Dev | 0.0 | 6.6 | 0.2 | | 0.2 | 0.3 | 1.1 | 3.6 | 7.0 | 11.9 | 10.4 | 6.5 |
| SEM | 0.0 | 2.7 | 0.1 | | 0.1 | 0.1 | 0.4 | 1.5 | 2.8 | 4.8 | 4.2 | 2.7 |

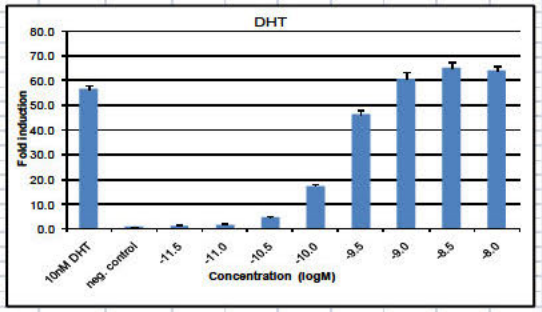
| | | | | | |
|---|---|---|---|---|---|
| | -10.5 | -10.0 | | -10.0 | -9.5 |
| PC10 | 6.6 | 29.4 | PC50 | 29.4 | 81.8 |
| | -10.4 | | | -9.8 | |

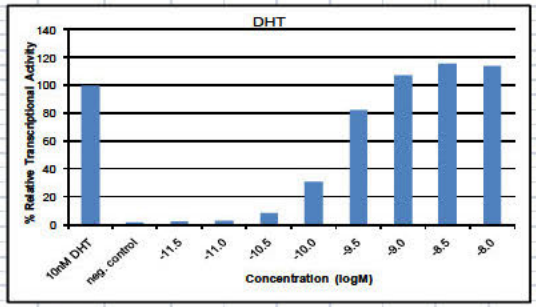



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 62.5 | 1.0 | 1.0 | 1.3 | 1.8 | 4.0 | 16.1 | 44.1 | 67.9 | 56.1 | 59.3 |
| | 54.8 | 1.0 | 0.9 | 1.5 | 1.7 | 4.1 | 17.6 | 46.9 | 67.9 | 73.2 | 61.2 |
| | 55.2 | 1.0 | 1.1 | 1.4 | 2.0 | 5.6 | 15.0 | 52.8 | 61.5 | 66.9 | 66.3 |
| | 54.4 | 1.1 | 1.0 | 1.4 | 1.5 | 4.4 | 18.5 | 41.3 | 51.4 | 62.2 | 62.5 |
| | 52.5 | 1.1 | 0.9 | 1.6 | 1.6 | 4.9 | 20.5 | 45.4 | 56.2 | 64.3 | 68.3 |
| | 59.3 | 1.1 | 0.8 | 1.5 | 1.8 | 4.9 | 16.2 | 47.5 | 58.0 | 67.9 | 67.0 |
| Mean | 56.4 | 1.0 | | 1.5 | 1.7 | 4.6 | 17.3 | 46.3 | 60.5 | 65.1 | 64.1 |
| Std Dev | 3.7 | 0.1 | | 0.1 | 0.2 | 0.6 | 2.0 | 3.9 | 6.6 | 5.8 | 3.6 |
| SEM | 1.5 | 0.0 | | 0.0 | 0.1 | 0.2 | 0.8 | 1.6 | 2.7 | 2.4 | 1.5 |
| CV% | *6.5* | *9.7* | | *6.9* | *9.4* | *12.6* | *11.6* | *8.3* | *10.9* | *8.9* | *5.6* |
| Relative Tran | 100 | 1.8 | | 2.6 | 3.1 | 8.2 | 30.7 | 82.1 | 107.1 | 115.3 | 113.6 |

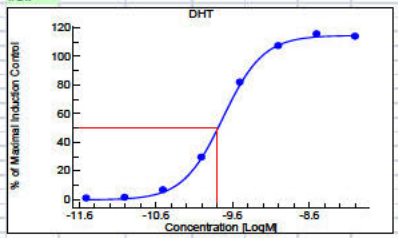



**Viability (% Control)**

| DHT | 10nM DHT | neg. cont | neg. cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 99 | 100 | 104 | 102 | 101 | 98 | 104 | 103 | 102 | 103 | 98 |
| StdDev | 2 | 5 | 5 | 5 | 7 | 5 | 6 | 7 | 6 | 6 | 4 |
| SEM | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 2 |
| %CV | 2.0 | 4.8 | 4.8 | 5.3 | 7.2 | 5.5 | 5.7 | 6.4 | 6.2 | 5.5 | 4.0 |

Fit -9.8
Chart #Ok




0 Bottom
114.9 Top
-9.7 EC50
1.7 Hill slope

# Data Spreadsheets

Experiment date: 20Oct2011
TopCount Model B9912V. Serial# 408672
11/11/11 15:00
Assay Conducted by: [redacted]

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound DHT

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| DHT | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 615500 | 11650 | 458750 | 584700 | 498700 | 613900 | 436650 | 741250 | 632400 | 633600 | 546350 | with 1nM DHT |
| B | 100 | 525450 | 10500 | 470000 | 571400 | 534400 | 557550 | 559050 | 635000 | 630600 | 708850 | 659050 | with 1nM DHT |
| C | 0 | 591300 | 12550 | 628450 | 501500 | 501250 | 601650 | 492450 | 716600 | 670650 | 678550 | 731150 | with 1nM DHT |
| D | 150 | 529000 | 11150 | 620000 | 577800 | 579950 | 679100 | 644050 | 636600 | 697850 | 951600 | 761700 | with 1nM DHT |
| E | 50 | 540200 | 562350 | 602050 | 605600 | 503450 | 679600 | 558750 | 663300 | 641000 | 673150 | 716150 | with 1000nM DHT |
| F | 50 | 533950 | 503450 | 564450 | 635200 | 579200 | 637500 | 568800 | 713800 | 731350 | 719100 | 723650 | with 1000nM DHT |
| G | 50 | 532400 | 558900 | 630400 | 545050 | 619350 | 672050 | 627700 | 676050 | 634450 | 701250 | 769850 | with 1000nM DHT |
| H | 50 | 487850 | 601150 | 646250 | 613650 | 552650 | 539550 | 536800 | 685150 | 619050 | 717850 | 646700 | with 1000nM DHT |
| Mean | 63 | 565313 | 11463 | 544300 | 558850 | 528575 | 613050 | 533050 | 682363 | 657875 | 743150 | 674563 | |
| Std Dev | 75 | 45099 | 864 | 92468 | 38617 | 37914 | 50245 | 89328 | 54703 | 32425 | 142364 | 95698 | |
| SEM | 38 | 22549 | 432 | 46234 | 19309 | 18957 | 25122 | 44664 | 27352 | 16212 | 71182 | 47849 | |
| CV% | 120.0 | 8.0 | 7.5 | 17.0 | 6.9 | 7.2 | 8.2 | 16.8 | 8.0 | 4.9 | 19.2 | 14.2 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 1.0 | 1.0 | 0.9 | 1.1 | 0.9 | 1.2 | 1.2 | 1.3 | 1.2 | |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 50 | 523600 | 579463 | 610788 | 599925 | 564213 | 637175 | 578013 | 684575 | 706463 | 702838 | 714088 | |
| Std Dev | 0 | 24071 | 21921 | 35897 | 38651 | 47773 | 54900 | 33540 | 21446 | 98194 | 21399 | 50814 | |
| SEM | 0 | 12035 | 10961 | 17948 | 19326 | 23887 | 27450 | 16770 | 10723 | 49097 | 10699 | 25407 | |
| CV% | 0.0 | 4.6 | 3.8 | 5.9 | 6.4 | 8.5 | 8.6 | 5.8 | 3.1 | 13.9 | 3.0 | 7.1 | |

Fold Induction (1nM DHT)

| | 10nM DH | neg. control | Induced con | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 53.7 | 1.0 | 40.0 | 51.0 | 43.5 | 53.6 | 38.1 | 64.7 | 55.2 | 55.3 | 47.7 |
| | 45.8 | 0.9 | 41.0 | 49.8 | 46.6 | 48.6 | 48.8 | 55.4 | 55.0 | 61.8 | 57.5 |
| | 51.6 | 1.1 | 54.8 | 43.8 | 43.7 | 52.5 | 43.0 | 62.5 | 58.5 | 59.2 | 63.8 |
| | 46.2 | 1.0 | 54.1 | 50.4 | 50.6 | 59.2 | 56.2 | 55.5 | 60.9 | 83.0 | 66.5 |
| | 47.1 | 49.1 | 52.5 | 52.8 | 44.1 | 59.3 | 48.7 | 57.9 | 55.9 | 58.7 | 62.5 |
| | 46.6 | 51.9 | 49.2 | 55.4 | 50.5 | 55.6 | 49.6 | 62.3 | 63.8 | 62.7 | 63.1 |
| | 46.4 | 48.8 | 55.0 | 47.6 | 54.0 | 58.6 | 54.8 | 59.0 | 72.8 | 61.2 | 67.2 |
| | 42.6 | 52.4 | 56.4 | 53.6 | 48.2 | 48.8 | 48.6 | 59.8 | 54.0 | 62.6 | 56.4 |
| Mean | 49.3 | 1.0 | 47.5 | 48.8 | 46.1 | 53.5 | 46.5 | 59.5 | 57.4 | 64.8 | 58.8 |
| Std Dev | 3.9 | 0.1 | 8.1 | 3.4 | 3.3 | 4.4 | 7.8 | 4.8 | 2.8 | 12.4 | 8.3 |
| SEM | 2.0 | 0.0 | 4.0 | 1.7 | 1.7 | 2.2 | 3.9 | 2.4 | 1.4 | 6.2 | 4.2 |
| CV% | 8.0 | 7.5 | 17.0 | 6.9 | 7.2 | 8.2 | 16.8 | 8.0 | 4.9 | 19.2 | 14.2 |
| Relative Tran | 100 | 2.0 | 96.3 | 98.9 | 93.5 | 108.4 | 94.3 | 120.7 | 116.4 | 131.5 | 119.3 |

Fold Induction (1000nM DHT)

| | 10nM DH | neg. control | Induced con | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 45.7 | 50.6 | 53.3 | 52.3 | 49.2 | 55.6 | 50.4 | 59.7 | 61.6 | 61.3 | 62.3 |
| Std Dev | 2.1 | 1.9 | 3.1 | 3.4 | 4.2 | 4.8 | 2.9 | 1.9 | 8.6 | 1.9 | 4.4 |
| SEM | 1.0 | 1.0 | 1.6 | 1.7 | 2.1 | 2.4 | 1.5 | 0.9 | 4.3 | 0.9 | 2.2 |
| CV% | 4.6 | 3.8 | 5.9 | 6.4 | 8.5 | 8.6 | 5.8 | 3.1 | 13.9 | 3.0 | 7.1 |
| Relative Tran | 100 | 110.7 | 116.7 | 114.6 | 107.8 | 121.7 | 110.4 | 130.7 | 134.9 | 134.2 | 136.4 |

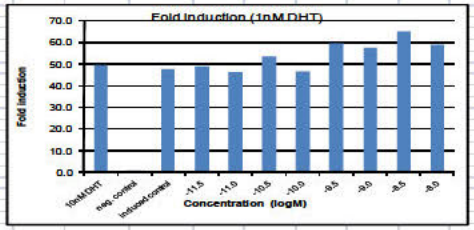
Mean VC 11463 Mean DHT 1000nM Control 579463

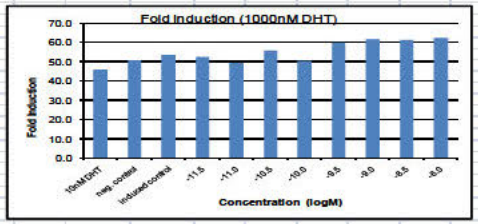
**Subtraction of VC from wells**

| DHT | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -11463 | 604038 | 188 | 447288 | 573238 | 487238 | 602438 | 425188 | 729788 | 620938 | 622138 | 534888 | with 1nM DHT |
| B | -11363 | 513988 | -963 | 458538 | 559938 | 522938 | 546088 | 547588 | 623538 | 619138 | 697388 | 647588 | with 1nM DHT |
| C | -11463 | 579838 | 1088 | 616988 | 490038 | 489788 | 590188 | 480988 | 705138 | 659188 | 667088 | 719688 | with 1nM DHT |
| D | -11313 | 517538 | -313 | 608538 | 566338 | 568488 | 667638 | 632588 | 625138 | 686388 | 940138 | 750238 | with 1nM DHT |
| E | -11413 | 528738 | 550888 | 590588 | 594138 | 493988 | 668138 | 547288 | 651838 | 629538 | 661688 | 704688 | with 1000nM DHT |
| F | -11413 | 522488 | 583988 | 552988 | 623738 | 567738 | 626038 | 557338 | 702338 | 719888 | 707638 | 712188 | with 1000nM DHT |
| G | -11413 | 520938 | 547438 | 618938 | 533588 | 607888 | 660588 | 616238 | 664588 | 822988 | 689788 | 758388 | with 1000nM DHT |
| H | -11413 | 476388 | 589688 | 634788 | 602388 | 541388 | 548088 | 545338 | 673688 | 607588 | 706388 | 635238 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 583663

| DHT | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -11400 | 553850 | 0 | 532838 | 547388 | 517113 | 601588 | 521588 | 670900 | 646413 | 731688 | 663100 |
| Std Dev | 75 | 45099 | 864 | 92468 | 38617 | 37914 | 50245 | 89328 | 54703 | 32425 | 142364 | 95698 |
| SEM | 38 | 22549 | 432 | 46234 | 19309 | 18957 | 25122 | 44664 | 27352 | 16212 | 71182 | 47849 |
| CV% | -0.7 | 8.1 | | 17.4 | 7.1 | 7.3 | 8.4 | 17.1 | 8.2 | 5.0 | 19.5 | 14.4 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 1.0 | 1.0 | 0.9 | 1.1 | 0.9 | 1.2 | 1.2 | 1.3 | 1.2 |




**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| DHT | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.2 | 113.4 | 0.0 | 83.9 | 107.6 | 91.4 | 113.1 | 79.8 | 137.0 | 116.5 | 116.8 | 100.4 | with 1nM DHT |
| B | -2.1 | 96.5 | -0.2 | 86.1 | 105.1 | 98.1 | 102.5 | 102.8 | 117.0 | 116.2 | 130.9 | 121.5 | with 1nM DHT |
| C | -2.2 | 108.8 | 0.2 | 115.8 | 92.0 | 91.9 | 110.8 | 90.3 | 132.3 | 123.7 | 125.2 | 135.1 | with 1nM DHT |
| D | -2.1 | 97.1 | -0.1 | 114.2 | 106.3 | 106.7 | 125.3 | 118.7 | 117.3 | 128.8 | 176.4 | 140.8 | with 1nM DHT |
| E | -2.0 | 90.6 | 94.4 | 101.2 | 101.8 | 84.6 | 114.5 | 93.8 | 111.7 | 107.9 | 113.4 | 120.7 | with 1000nM DHT |
| F | -2.0 | 89.5 | 100.1 | 94.7 | 106.9 | 97.3 | 107.3 | 95.5 | 120.3 | 123.3 | 121.2 | 122.0 | with 1000nM DHT |
| G | -2.0 | 89.3 | 93.8 | 106.0 | 91.4 | 104.2 | 113.2 | 105.6 | 113.9 | 141.0 | 118.2 | 129.9 | with 1000nM DHT |
| H | -2.0 | 81.6 | 101.0 | 108.8 | 103.2 | 92.8 | 93.9 | 93.4 | 115.4 | 104.1 | 121.0 | 108.8 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| DHT | blank | 10nM DHT | neg. control | induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.1 | 103.9 | 0.0 | 100.0 | 102.7 | 97.0 | 112.9 | 97.9 | 125.9 | 121.3 | 137.3 | 124.4 |
| Std Dev | 0.0 | 8.5 | 0.2 | 17.4 | 7.2 | 7.1 | 9.4 | 16.8 | 10.3 | 6.1 | 26.7 | 18.0 |
| SEM | 0.0 | 4.2 | 0.1 | 8.7 | 3.6 | 3.6 | 4.7 | 8.4 | 5.1 | 3.0 | 13.4 | 9.0 |

**High Agonist control, % of Maximal Induction Control (Average)**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.0 | 87.7 | 97.3 | 102.7 | 100.8 | 94.7 | 107.2 | 97.1 | 115.3 | 119.1 | 118.5 | 120.4 |
| Std Dev | 0.0 | 4.1 | 3.8 | 6.2 | 6.6 | 8.2 | 9.4 | 5.7 | 3.7 | 16.8 | 3.7 | 8.7 |
| SEM | 0.0 | 2.1 | 1.9 | 3.1 | 3.3 | 4.1 | 4.7 | 2.9 | 1.8 | 8.4 | 1.8 | 4.4 |

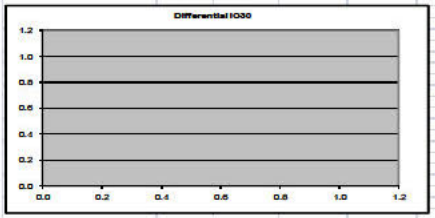
| DHT | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|
| Differential | -1.9 | -2.3 | -5.7 | -0.8 | -10.6 | -2.2 | -18.9 | -4.1 |

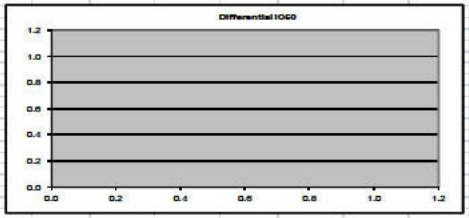
Differential IC30 [redacted] Differential IC60 [redacted]

Relative Inhibitory Concentration Max (RICMax)
100.0 NA #VALUE!

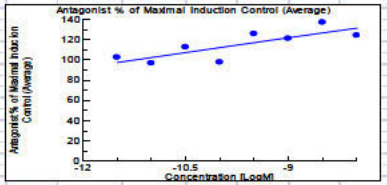
**Viability (% Control)**

| DHT | 10nM DHT | neg. con | Induced | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 99 | 100 | 104 | 102 | 101 | 98 | 104 | 103 | 102 | 103 | 98 |
| StdDev | 2 | 5 | 5 | 5 | 7 | 5 | 6 | 7 | 6 | 6 | 4 |
| SEM | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 2 |
| %CV | 2.0 | 4.8 | 4.8 | 5.3 | 7.2 | 5.5 | 5.7 | 6.4 | 6.2 | 5.5 | 4.0 |



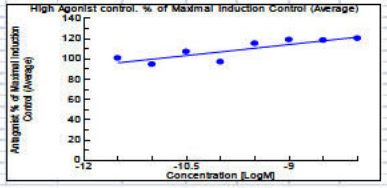




Fit Chart <-11.5 #Ok




0 Bottom
212.3 Top
-10.7 EC50
0.1 Hill slope

Fit Chart <-11.5 #Ok




0 Bottom
238.3 Top
-8.4 EC50
0.1 Hill slope

# Data Spreadsheets



| | | | | |
|---|---|---|---|---|
| Experiment date: | 3Nov2011 | blank = no cells, vehicle control | Spreadsheet locked on: | 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry | |
| 11/11/11 15:00 | | Study Number: | 9070-100107ARTA | |
| Assay Conducted by: | [redacted] | Compound | DHT | |

| DHT Ag | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 150 | 228150 | 5450 | 3300 | 4900 | 8300 | 15900 | 65450 | 212400 | 317550 | 405000 | 276200 | |
| B | 50 | 290950 | 6000 | 4700 | 5750 | 10200 | 22400 | 96400 | 230150 | 389400 | 421300 | 433600 | |
| C | 50 | 248000 | 4750 | 4050 | 6600 | 10750 | 26000 | 99700 | 253800 | 312500 | 366050 | 444450 | |
| D | 0 | 335950 | 5400 | 5450 | 7200 | 9600 | 31600 | 108550 | 269750 | 388300 | 553300 | 521300 | |
| E | 0 | 314850 | 5350 | 3500 | 5650 | 10000 | 29250 | 83850 | 246050 | 366650 | 406650 | 445450 | |
| F | 0 | 364850 | 4300 | 5450 | 5750 | 7950 | 29400 | 70000 | 240400 | 323750 | 407350 | 363700 | |
| G | *50* | *110900* | *12350* | *11100* | *10950* | *13300* | *27600* | *22800* | *37600* | *21800* | *51850* | *121250* | with 10μM Nilutamide |
| H | *0* | *108000* | *6850* | *7200* | *7000* | *8000* | *9700* | *7750* | *12150* | *18600* | *26200* | *88500* | with 10μM Nilutamide |
| Mean | 42 | 297125 | 4808 | | 5975 | 9467 | 25758 | 87325 | 242092 | 349692 | 426608 | 414117 | |
| Std Dev | 58 | 52187 | 860 | | 807 | 1109 | 5798 | 17186 | 19722 | 35900 | 64780 | 84063 | |
| SEM | 24 | 21305 | 248 | | 329 | 453 | 2367 | 7016 | 8051 | 14656 | 26446 | 34318 | |
| CV% | *140.3* | *17.6* | *17.88* | | *13.5* | *11.7* | *22.5* | *19.7* | *8.1* | *10.3* | *15.2* | *20.3* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.1 | 0.3 | 0.8 | 1.2 | 1.4 | 1.4 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 25 | 109450 | 9375 | | 8975 | 10650 | 18650 | 15275 | 24875 | 20200 | 39025 | 104875 | |
| Std Dev | 35 | 2051 | 2765 | | 2793 | 3748 | 12657 | 10642 | 17996 | 2263 | 18137 | 23158 | |

Mean VC 4808 Mean Nilutamide Control 9375

**Subtraction of VC from wells**

| DHT Ag | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 150 | 223342 | 642 | -1508 | 92 | 3492 | 11092 | 60642 | 207592 | 312742 | 400192 | 271392 | |
| B | 50 | 286142 | 1192 | -108 | 942 | 5392 | 17592 | 91592 | 225342 | 384592 | 416492 | 428792 | |
| C | 50 | 243192 | -58 | -758 | 1792 | 5942 | 21192 | 94892 | 248992 | 307692 | 361242 | 439642 | |
| D | 0 | 331142 | 592 | 642 | 2392 | 4792 | 26792 | 103742 | 264942 | 383492 | 548492 | 516492 | |
| E | 0 | 310042 | 542 | -1308 | 842 | 5192 | 24442 | 79042 | 241242 | 361842 | 401842 | 440642 | |
| F | 0 | 360042 | -508 | 642 | 942 | 3142 | 24592 | 65192 | 235592 | 318942 | 402542 | 358892 | |
| G | 50 | 101525 | 2975 | 1725 | 1575 | 3925 | 18225 | 13425 | 28225 | 12425 | 42475 | 111875 | with 10μM Nilutamide |
| H | 0 | 98625 | -2525 | -2175 | -2375 | -1375 | 325 | -1625 | 2775 | 9225 | 16825 | 79125 | with 10μM Nilutamide |

**Corrected Data Means**

| DHT Ag | blank | 10nM DHT | neg. control | | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 42 | 292317 | 0 | | 1167 | 4658 | 20950 | 82517 | 237283 | 344883 | 421800 | 409308 |
| Std Dev | 58 | 52187 | 860 | | 807 | 1109 | 5798 | 17186 | 19722 | 35900 | 64780 | 84063 |
| SEM | 24 | 21305 | 248 | | 329 | 453 | 2367 | 7016 | 8051 | 14656 | 26446 | 34318 |
| CV% | *140.3* | *17.9* | | | *69.1* | *23.8* | *27.7* | *20.8* | *8.3* | *10.4* | *15.4* | *20.5* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.1 | 0.3 | 0.8 | 1.2 | 1.4 | 1.4 |

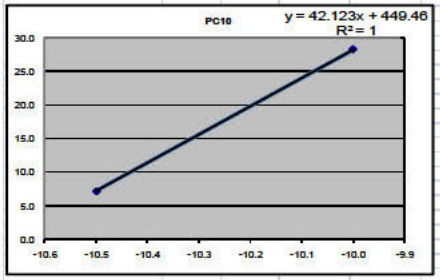
**Agonist: % of Maximal Induction Control**

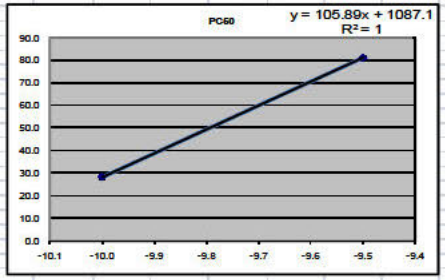
| DHT Ag | blank | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.1 | 76.4 | 0.2 | -0.5 | 0.0 | 1.2 | 3.8 | 20.7 | 71.0 | 107.0 | 136.9 | 92.8 | |
| B | 0.0 | 97.9 | 0.4 | 0.0 | 0.3 | 1.8 | 6.0 | 31.3 | 77.1 | 131.6 | 142.5 | 146.7 | |
| C | 0.0 | 83.2 | 0.0 | -0.3 | 0.6 | 2.0 | 7.2 | 32.5 | 85.2 | 105.3 | 123.6 | 150.4 | |
| D | 0.0 | 113.3 | 0.2 | 0.2 | 0.8 | 1.6 | 9.2 | 35.5 | 90.6 | 131.2 | 187.6 | 176.7 | |
| E | 0.0 | 106.1 | 0.2 | -0.4 | 0.3 | 1.8 | 8.4 | 27.0 | 82.5 | 123.8 | 137.5 | 150.7 | |
| F | 0.0 | 123.2 | -0.2 | 0.2 | 0.3 | 1.1 | 8.4 | 22.3 | 80.6 | 109.1 | 137.7 | 122.8 | |
| G | 0.0 | 34.7 | 1.0 | 0.6 | 0.5 | 1.3 | 6.2 | 4.6 | 9.7 | 4.3 | 14.5 | 38.3 | with 10μM Nilutamide |
| H | 0.0 | 33.7 | -0.9 | -0.7 | -0.8 | -0.5 | 0.1 | -0.6 | 0.9 | 3.2 | 5.8 | 27.1 | with 10μM Nilutamide |

**% of Maximal Induction Control**

| DHT Ag | blank | 10nM DHT | neg. control | | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.4 | 1.6 | 7.2 | 28.2 | 81.2 | 118.0 | 144.3 | 140.0 |
| Std Dev | 0.0 | 17.9 | 0.3 | | 0.3 | 0.4 | 2.0 | 5.9 | 6.7 | 12.3 | 22.2 | 28.8 |
| SEM | 0.0 | 7.3 | 0.1 | | 0.1 | 0.2 | 0.8 | 2.4 | 2.8 | 5.0 | 9.0 | 11.7 |

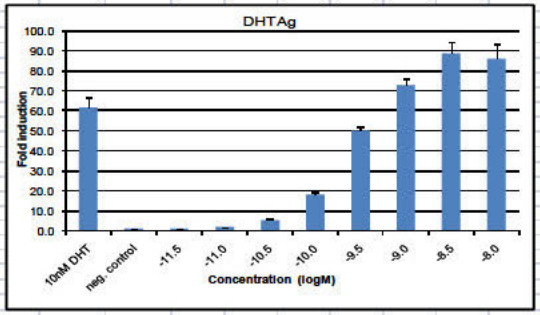
| | -10.5 | -10.0 | | -10.0 | -9.5 |
|---|---|---|---|---|---|
| PC10 | 7.2 | 28.2 | PC50 | 28.2 | 81.2 |
| | -10.4 | | | -9.8 | |

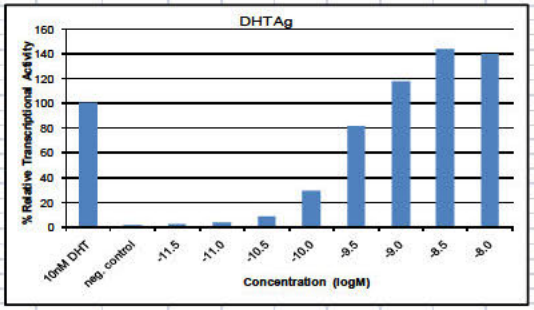



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 47.4 | 1.1 | 0.7 | 1.0 | 1.7 | 3.3 | 13.6 | 44.2 | 66.0 | 84.2 | 57.4 |
| | 60.5 | 1.2 | 1.0 | 1.2 | 2.1 | 4.7 | 20.0 | 47.9 | 81.0 | 87.6 | 90.2 |
| | 51.6 | 1.0 | 0.8 | 1.4 | 2.2 | 5.4 | 20.7 | 52.8 | 65.0 | 76.1 | 92.4 |
| | 69.9 | 1.1 | 1.1 | 1.5 | 2.0 | 6.6 | 22.6 | 56.1 | 80.8 | 115.1 | 108.4 |
| | 65.5 | 1.1 | 0.7 | 1.2 | 2.1 | 6.1 | 17.4 | 51.2 | 76.3 | 84.6 | 92.6 |
| | 75.9 | 0.9 | 1.1 | 1.2 | 1.7 | 6.1 | 14.6 | 50.0 | 67.3 | 84.7 | 75.6 |
| Mean | 61.8 | 1.0 | | 1.2 | 2.0 | 5.4 | 18.2 | 50.3 | 72.7 | 88.7 | 86.1 |
| Std Dev | 10.9 | 0.2 | | 0.2 | 0.2 | 1.2 | 3.6 | 4.1 | 7.5 | 13.5 | 17.5 |
| SEM | 4.4 | 0.1 | | 0.1 | 0.1 | 0.5 | 1.5 | 1.7 | 3.0 | 5.5 | 7.1 |
| CV% | *17.6* | *17.9* | | *13.5* | *11.7* | *22.5* | *19.7* | *8.1* | *10.3* | *15.2* | *20.3* |
| Relative Trar | 100 | 1.6 | | 2.0 | 3.2 | 8.7 | 29.4 | 81.5 | 117.7 | 143.6 | 139.4 |

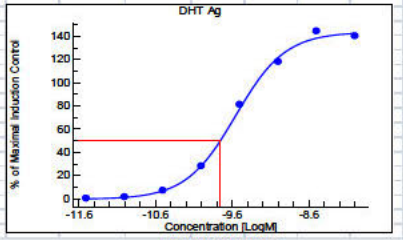



**Viability (% Control)**

| DHT Ag | 10nM DHT | neg. con | neg. con | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 98 | 100 | 104 | 100 | 106 | 108 | 106 | 103 | 107 | 117 | 98 |
| StdDev | 11 | 7 | 3 | 9 | 11 | 14 | 12 | 14 | 6 | 7 | 7 |
| SEM | 5 | 3 | 1 | 4 | 5 | 6 | 5 | 6 | 2 | 3 | 3 |
| %CV | 11.7 | 6.7 | 2.9 | 8.9 | 10.7 | 13.0 | 11.5 | 13.4 | 5.5 | 5.6 | 7.3 |

Fit -9.8
Chart #Ok




0 Bottom
143.9 Top
-9.6 EC50
1.3 Hill slope

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 3Nov2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:00 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | [redacted] | Compound | DHT |

| DHT Antag | blank | 10nM DHT | neg. control | Induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 150 | 194400 | 4400 | 170950 | 205600 | 228550 | 194450 | 200700 | 180650 | 312950 | 350850 | 241950 | with 1nM DHT |
| B | 50 | 246950 | 4350 | 249000 | 273900 | 234650 | 311750 | 253750 | 317450 | 377350 | 399300 | 335850 | with 1nM DHT |
| C | 100 | 296350 | 4650 | 250150 | 296550 | 278100 | 301700 | 279400 | 304350 | 352900 | 331750 | 379000 | with 1nM DHT |
| D | 100 | 312800 | 4650 | 239750 | 285200 | 249650 | 375200 | 293150 | 360500 | 320300 | 379550 | 309800 | with 1nM DHT |
| E | 50 | 301300 | 286900 | 259000 | 294550 | 301100 | 354000 | 364200 | 276350 | 314850 | 347450 | 286100 | with 1000nM DHT |
| F | 0 | 306700 | 264400 | 268900 | 232150 | 331450 | 278650 | 267950 | 330800 | 300400 | 281150 | 310600 | with 1000nM DHT |
| G | 0 | 250700 | 255850 | 209450 | 212750 | 253600 | 280600 | 297800 | 316850 | 294900 | 353700 | 299350 | with 1000nM DHT |
| H | 0 | 257800 | 173800 | 172650 | 189850 | 244300 | 174000 | 179650 | 201800 | 253650 | 225150 | 226000 | with 1000nM DHT |
| | | | | | | | | | | | | | Fold Induction (1nM DH |
| Mean | 100 | 262625 | 4513 | 227463 | 265288 | 247738 | 295775 | 256750 | 290738 | 350875 | 365363 | 316650 | |
| Std Dev | 41 | 53402 | 160 | 37962 | 40917 | 22098 | 74979 | 40778 | 77212 | 40167 | 29964 | 57397 | |
| SEM | 20 | 26701 | 80 | 18981 | 20458 | 11049 | 37489 | 20389 | 38606 | 20083 | 14982 | 28698 | |
| CV% | 40.6 | 20.3 | 3.5 | 16.7 | 15.4 | 8.9 | 25.3 | 15.9 | 26.6 | 11.4 | 8.2 | 18.1 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.0 | 0.9 | 1.1 | 1.0 | 1.1 | 1.3 | 1.4 | 1.2 | Fold Induction (1000nM |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 279625 | 247738 | 227500 | 232325 | 283113 | 274113 | 277400 | 281950 | 290950 | 301863 | 281063 | |
| Std Dev | 25 | 29598 | 52368 | 44872 | 44942 | 40511 | 74546 | 76583 | 57854 | 26251 | 60771 | 37840 | |
| SEM | 13 | 14799 | 26184 | 22436 | 22471 | 20255 | 37273 | 38291 | 28927 | 13126 | 30385 | 18920 | |
| CV% | 200.0 | 10.6 | 21.1 | 19.7 | 19.3 | 14.3 | 27.2 | 27.6 | 20.3 | 9.0 | 20.1 | 13.5 | |

Mean VC 4513 Mean DHT 1000nM Control 247738

**Subtraction of VC from wells**

| DHT Antag | blank | 10nM DHT | neg. control | Induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -4363 | 189888 | -113 | 166438 | 200988 | 224038 | 189938 | 196188 | 176138 | 308438 | 346338 | 237438 | with 1nM DHT |
| B | -4463 | 242438 | -163 | 244488 | 269388 | 230138 | 307238 | 249238 | 312938 | 372838 | 394788 | 331338 | with 1nM DHT |
| C | -4413 | 291838 | 138 | 245638 | 292038 | 273588 | 297188 | 274888 | 299838 | 388388 | 327238 | 374488 | with 1nM DHT |
| D | -4413 | 308288 | 138 | 235238 | 280688 | 245138 | 370688 | 288638 | 355988 | 315788 | 375038 | 305288 | with 1nM DHT |
| E | -4463 | 296788 | 292388 | 254488 | 290038 | 296588 | 349488 | 359688 | 273838 | 310338 | 342938 | 283588 | with 1000nM DHT |
| F | -4513 | 304188 | 259888 | 264388 | 227638 | 326938 | 274138 | 263438 | 326288 | 295888 | 276638 | 306088 | with 1000nM DHT |
| G | -4513 | 246188 | 251338 | 204938 | 208238 | 251088 | 285288 | 293288 | 312338 | 290388 | 349188 | 295038 | with 1000nM DHT |
| H | -4513 | 253288 | 169288 | 168138 | 185338 | 239788 | 169488 | 175138 | 197288 | 249138 | 220638 | 221488 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 233106

| DHT Antag | blank | 10nM DHT | neg. control | Induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -4413 | 258113 | 0 | 222950 | 260775 | 243225 | 291263 | 252238 | 286225 | 346363 | 360850 | 312138 |
| Std Dev | 41 | 53402 | 160 | 37962 | 40917 | 22098 | 74979 | 40778 | 77212 | 40167 | 29964 | 57397 |
| SEM | 20 | 26701 | 80 | 18981 | 20458 | 11049 | 37489 | 20389 | 38606 | 20083 | 14982 | 28698 |
| CV% | -0.9 | 20.7 | | 17.0 | 15.7 | 9.1 | 25.7 | 16.2 | 27.0 | 11.6 | 8.3 | 18.4 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 1.0 | 0.9 | 1.1 | 1.0 | 1.1 | 1.3 | 1.4 | 1.2 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| DHT Antag | blank | 10nM DHT | neg. control | Induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.0 | 86.2 | -0.1 | 74.7 | 90.1 | 100.5 | 85.2 | 88.0 | 79.0 | 138.3 | 155.3 | 106.5 | with 1nM DHT |
| B | -2.0 | 108.7 | -0.1 | 109.7 | 120.8 | 103.2 | 137.8 | 111.8 | 140.4 | 167.2 | 177.1 | 148.6 | with 1nM DHT |
| C | -2.0 | 130.9 | 0.1 | 110.2 | 131.0 | 122.7 | 133.3 | 123.3 | 134.5 | 174.3 | 146.8 | 168.0 | with 1nM DHT |
| D | -2.0 | 138.3 | 0.1 | 105.5 | 125.9 | 110.0 | 166.3 | 129.5 | 159.7 | 141.6 | 168.2 | 136.9 | with 1nM DHT |
| E | -1.9 | 127.3 | 125.4 | 109.2 | 124.4 | 127.2 | 149.9 | 154.3 | 117.5 | 133.1 | 147.1 | 121.7 | with 1000nM DHT |
| F | -1.9 | 130.5 | 111.5 | 113.4 | 97.7 | 140.3 | 117.6 | 113.0 | 140.0 | 126.9 | 118.7 | 131.3 | with 1000nM DHT |
| G | -1.9 | 105.6 | 107.8 | 87.9 | 89.3 | 107.7 | 122.4 | 125.8 | 134.0 | 124.6 | 149.8 | 126.6 | with 1000nM DHT |
| H | -1.9 | 108.7 | 72.6 | 72.1 | 79.5 | 102.9 | 72.7 | 75.1 | 84.6 | 106.9 | 94.7 | 95.0 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

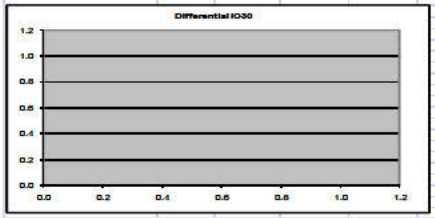
| DHT Antag | blank | 10nM DHT | neg. control | Induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.0 | 115.8 | 0.0 | 100.0 | 117.0 | 109.1 | 130.6 | 113.1 | 128.4 | 155.4 | 161.9 | 140.9 |
| Std Dev | 0.0 | 24.0 | 0.1 | 17.0 | 18.4 | 9.9 | 33.6 | 18.3 | 34.6 | 18.0 | 13.4 | 25.7 |
| SEM | 0.0 | 12.0 | 0.0 | 8.5 | 9.2 | 5.0 | 16.8 | 9.1 | 17.3 | 9.0 | 6.7 | 12.9 |

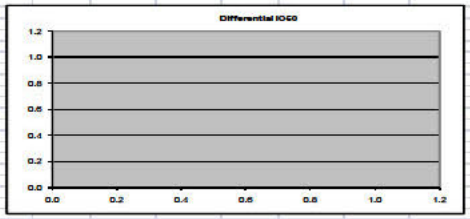
**High Agonist control, % of Maximal Induction Control (Average)**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.9 | 118.0 | 104.3 | 95.7 | 97.7 | 119.5 | 115.7 | 117.1 | 119.0 | 122.9 | 127.6 | 118.6 |
| Std Dev | 0.0 | 12.7 | 22.5 | 19.2 | 19.3 | 17.4 | 32.0 | 32.9 | 24.8 | 11.3 | 26.1 | 16.2 |
| SEM | 0.0 | 6.3 | 11.2 | 9.6 | 9.6 | 8.7 | 16.0 | 16.4 | 12.4 | 5.6 | 13.0 | 8.1 |

| DHT Antag | | | | | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.0 | 2.2 | 104.3 | -4.3 | -19.2 | 10.4 | -15.0 | 3.9 | -9.4 | -32.5 | -34.3 | -21.4 |

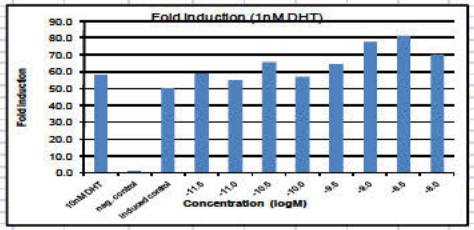
Differential IC30 [ ] Differential IC60 [ ] Relative Inhibitory Concentration Max (RICMax): 100.0 NA #VALUE!

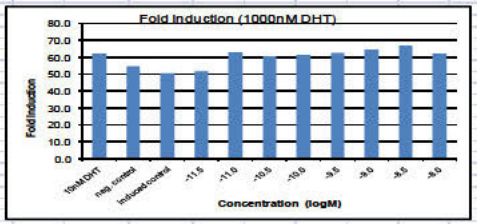



**FOLD INDUCTION**

| | 10nM DHT | neg. control | Induced cont | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 43.1 | 1.0 | 37.9 | 45.5 | 50.6 | 43.1 | 44.5 | 40.0 | 69.4 | 77.8 | 53.6 |
| | 54.7 | 1.0 | 55.2 | 60.7 | 52.0 | 69.1 | 56.2 | 70.3 | 83.6 | 88.5 | 74.4 |
| | 65.7 | 1.0 | 55.4 | 65.7 | 61.6 | 66.9 | 61.9 | 67.4 | 87.1 | 73.5 | 84.0 |
| | 69.3 | 1.0 | 53.1 | 63.2 | 55.3 | 83.1 | 65.0 | 79.9 | 71.0 | 84.1 | 68.7 |
| | 66.8 | 65.8 | 57.4 | 65.3 | 66.7 | 78.4 | 80.7 | 61.7 | 69.8 | 77.0 | 63.8 |
| | 68.4 | 58.6 | 59.6 | 51.4 | 73.5 | 61.8 | 59.4 | 73.3 | 66.6 | 62.3 | 68.8 |
| | 55.6 | 56.7 | 46.4 | 47.1 | 56.6 | 64.2 | 66.0 | 70.2 | 65.4 | 78.4 | 66.4 |
| | 57.1 | 38.5 | 38.3 | 42.1 | 54.1 | 38.6 | 39.8 | 44.7 | 56.3 | 49.9 | 50.1 |
| Mean | 58.2 | 1.0 | 50.4 | 58.8 | 54.9 | 65.5 | 56.9 | 64.4 | 77.8 | 81.0 | 70.2 |
| Std Dev | 11.8 | 0.0 | 8.4 | 9.1 | 4.9 | 16.6 | 9.0 | 17.1 | 8.9 | 6.6 | 12.7 |
| SEM | 5.9 | 0.0 | 4.2 | 4.5 | 2.4 | 8.3 | 4.5 | 8.6 | 4.5 | 3.3 | 6.4 |
| CV% | 20.3 | 3.5 | 16.7 | 15.4 | 8.9 | 25.3 | 15.9 | 26.6 | 11.4 | 8.2 | 18.1 |
| Relative Tran | 100 | 1.7 | 86.6 | 101.0 | 94.3 | 112.6 | 97.8 | 110.7 | 133.6 | 139.1 | 120.6 |
| Mean | 62.0 | 54.9 | 50.4 | 51.5 | 62.7 | 60.7 | 61.5 | 62.5 | 64.5 | 66.9 | 62.3 |
| Std Dev | 6.6 | 11.6 | 9.9 | 10.0 | 9.0 | 16.5 | 17.0 | 12.8 | 5.8 | 13.5 | 8.4 |
| SEM | 3.3 | 5.8 | 5.0 | 5.0 | 4.5 | 8.3 | 8.5 | 6.4 | 2.9 | 6.7 | 4.2 |
| CV% | 10.6 | 21.1 | 19.7 | 19.3 | 14.3 | 27.2 | 27.6 | 20.5 | 9.0 | 20.1 | 13.5 |
| Relative Tran | 100 | 88.6 | 81.4 | 83.1 | 101.2 | 98.0 | 99.2 | 100.8 | 104.1 | 108.0 | 100.5 |

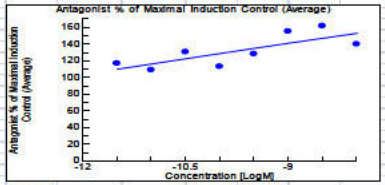



**Viability (% Control)**

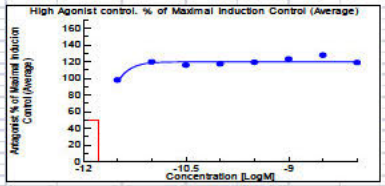
| DHT Antag | 10nM DHT | neg. con | Induced | -11.5 | -11.0 | -10.5 | -10.0 | -9.5 | -9.0 | -8.5 | -8.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 98 | 100 | 104 | 100 | 106 | 108 | 106 | 103 | 107 | 117 | 98 |
| StdDev | 11 | 7 | 3 | 9 | 11 | 14 | 12 | 14 | 6 | 7 | 7 |
| SEM | 5 | 3 | 1 | 4 | 5 | 6 | 5 | 6 | 2 | 3 | 3 |
| %CV | 11.7 | 6.7 | 2.9 | 8.9 | 10.7 | 13.0 | 11.5 | 13.4 | 5.5 | 5.6 | 7.3 |

Fit <-11.5
Chart #Ok




0 Bottom
238.2 Top
-10.8 EC50
0.1 Hill slope

Fit <-11.5
Chart #Ok




0 Bottom
120.2 Top
-11.7 EC50
2.8 Hill slope

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 13oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:00 | | Study Number: | 9070-100107 |
| Assay Conducted by: | | Compound | Nilutamide (Nil) |

| Nilutamide ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1302000 | 22300 | 25850 | 38000 | 20300 | 16100 | 15600 | 23250 | 32400 | 57850 | 800 | |
| B | 50 | 1212000 | 24350 | 21200 | 37600 | 18050 | 15700 | 12000 | 24550 | 29100 | 47750 | 1900 | |
| C | 200 | 1253850 | 27150 | 25650 | 36450 | 21000 | 22500 | 15000 | 23000 | 32250 | 51700 | 1650 | |
| D | 0 | 1366150 | 29150 | 27350 | 39500 | 29450 | 22600 | 15450 | 21250 | 33900 | 51900 | 2950 | |
| E | 50 | 1544450 | 27700 | 33200 | 36850 | 28600 | 22400 | 15450 | 24950 | 33350 | 55800 | 2150 | |
| F | 0 | 1501000 | 24000 | 25550 | 38750 | 28000 | 18600 | 18050 | 21400 | 35400 | 59600 | 3500 | |
| G | *100* | *365900* | *33400* | *79050* | *71450* | *67800* | *53500* | *35500* | *64150* | *53500* | *35000* | *1200* | with 10µM Nilutamide |
| H | *0* | *442350* | *28100* | *32300* | *30950* | *30700* | *30350* | *31100* | *45100* | *51200* | *45000* | *1450* | with 10µM Nilutamide |
| Mean | 58 | 1363242 | 26121 | | 37858 | 24233 | 19650 | 15258 | 23067 | 32733 | 54100 | 2158 | |
| Std Dev | 74 | 134472 | 3183 | | 1147 | 4993 | 3277 | 1932 | 1540 | 2117 | 4430 | 959 | |
| SEM | 30 | 54898 | 919 | | 468 | 2038 | 1338 | 789 | 629 | 864 | 1809 | 391 | |
| CV% | *126.2* | *9.9* | *12.18* | | *3.0* | *20.6* | *16.7* | *12.7* | *6.7* | *6.5* | *8.2* | *44.4* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 50 | 404125 | 43213 | | 51200 | 49250 | 41925 | 33300 | 54625 | 52350 | 40000 | 1325 | |
| Std Dev | 71 | 54058 | 24001 | | 28638 | 26234 | 16370 | 3111 | 13470 | 1626 | 7071 | 177 | |

Mean VC 26121 Mean Nilutamide Control 43213

**Subtraction of VC from wells**

| Nilutamide ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1275879 | -3821 | -271 | 11879 | -5821 | -10021 | -10521 | -2871 | 6279 | 31729 | -25321 | |
| B | 50 | 1185879 | -1771 | -4921 | 11479 | -8071 | -10421 | -14121 | -1571 | 2979 | 21629 | -24221 | |
| C | 200 | 1227729 | 1029 | -471 | 10329 | -5121 | -3621 | -11121 | -3121 | 6129 | 25579 | -24471 | |
| D | 0 | 1340029 | 3029 | 1229 | 13379 | 3329 | -3521 | -10671 | -4871 | 7779 | 25779 | -23171 | |
| E | 50 | 1518329 | 1579 | 7079 | 10729 | 2479 | -3721 | -10671 | -1171 | 7229 | 29679 | -23971 | |
| F | 0 | 1474879 | -2121 | -571 | 12629 | 1879 | -7521 | -8071 | -4721 | 9279 | 33479 | -22621 | |
| G | 100 | 322688 | -9813 | 35838 | 28238 | 24588 | 10288 | -7713 | 20938 | 10288 | -8213 | -42013 | with 10µM Nilutamide |
| H | 0 | 399138 | -15113 | -10913 | -12263 | -12513 | -12863 | -12113 | 1888 | 7988 | 1788 | -41763 | with 10µM Nilutamide |

**Corrected Data Means**

| Nilutamide ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 58 | 1337121 | 0 | | 11738 | -1888 | -6471 | -10863 | -3054 | 6613 | 27979 | -23963 |
| Std Dev | 74 | 134472 | 3183 | | 1147 | 4993 | 3277 | 1932 | 1540 | 2117 | 4430 | 959 |
| SEM | 30 | 54898 | 919 | | 468 | 2036 | 1338 | 789 | 629 | 864 | 1809 | 391 |
| CV% | *126.2* | *10.1* | | | *9.8* | *-264.5* | *-50.6* | *-17.8* | *-50.4* | *32.0* | *15.8* | *-4.0* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

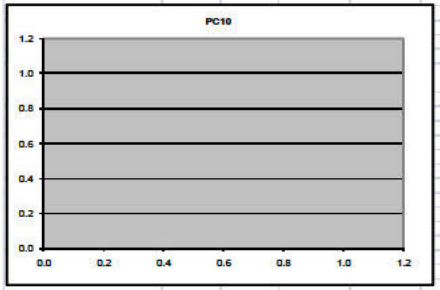
**Agonist: % of Maximal Induction Control**

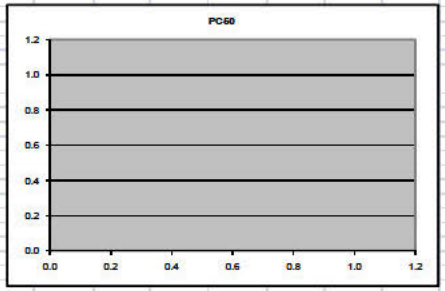
| Nilutamide ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 95.4 | -0.3 | 0.0 | 0.9 | -0.4 | -0.7 | -0.8 | -0.2 | 0.5 | 2.4 | -1.9 | |
| B | 0.0 | 88.7 | -0.1 | -0.4 | 0.9 | -0.6 | -0.8 | -1.1 | -0.1 | 0.2 | 1.6 | -1.8 | |
| C | 0.0 | 91.8 | 0.1 | 0.0 | 0.8 | -0.4 | -0.3 | -0.8 | -0.2 | 0.5 | 1.9 | -1.8 | |
| D | 0.0 | 100.2 | 0.2 | 0.1 | 1.0 | 0.2 | -0.3 | -0.8 | -0.4 | 0.6 | 1.9 | -1.7 | |
| E | 0.0 | 113.6 | 0.1 | 0.5 | 0.8 | 0.2 | -0.3 | -0.8 | -0.1 | 0.5 | 2.2 | -1.8 | |
| F | 0.0 | 110.3 | -0.2 | 0.0 | 0.9 | 0.1 | -0.6 | -0.6 | -0.4 | 0.7 | 2.5 | -1.7 | |
| G | 0.0 | 24.1 | -0.7 | 2.7 | 2.1 | 1.8 | 0.8 | -0.6 | 1.6 | 0.8 | -0.6 | -3.1 | with 10µM Nilutamide |
| H | 0.0 | 29.9 | -1.1 | -0.8 | -0.9 | -0.9 | -1.0 | -0.9 | 0.1 | 0.6 | 0.1 | -3.1 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Nilutamide ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.9 | -0.1 | -0.5 | -0.8 | -0.2 | 0.5 | 2.1 | |
| Std Dev | 0.0 | 10.1 | 0.2 | | 0.1 | 0.4 | 0.2 | 0.1 | 0.1 | 0.2 | 0.3 | |
| SEM | 0.0 | 4.1 | 0.1 | | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | |

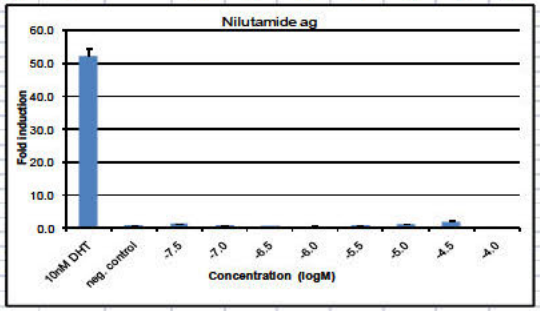
PC10 PC50

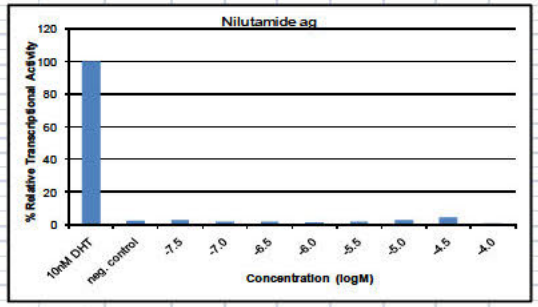



**FOLD INDUCTION**

| | 10nM DH | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 49.8 | 0.9 | 1.0 | 1.5 | 0.8 | 0.6 | 0.6 | 0.9 | 1.2 | 2.2 | 0.0 | |
| | 46.4 | 0.9 | 0.8 | 1.4 | 0.7 | 0.6 | 0.5 | 0.9 | 1.1 | 1.8 | 0.1 | |
| | 48.0 | 1.0 | 1.0 | 1.4 | 0.8 | 0.9 | 0.6 | 0.9 | 1.2 | 2.0 | 0.1 | |
| | 52.3 | 1.1 | 1.0 | 1.5 | 1.1 | 0.9 | 0.6 | 0.8 | 1.3 | 2.0 | 0.1 | |
| | 59.1 | 1.1 | 1.3 | 1.4 | 1.1 | 0.9 | 0.6 | 1.0 | 1.3 | 2.1 | 0.1 | |
| | 57.5 | 0.9 | 1.0 | 1.5 | 1.1 | 0.7 | 0.7 | 0.8 | 1.4 | 2.3 | 0.1 | |
| Mean | 52.2 | 1.0 | | 1.4 | 0.9 | 0.8 | 0.6 | 0.9 | 1.3 | 2.1 | 0.1 | |
| Std Dev | 5.1 | 0.1 | | 0.0 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | |
| SEM | 2.1 | 0.0 | | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | |
| CV% | *9.9* | *12.2* | | *3.0* | *20.6* | *16.7* | *12.7* | *6.7* | *6.5* | *8.2* | *44.4* | |
| Relative Trar | 100 | 1.9 | | 2.8 | 1.8 | 1.4 | 1.1 | 1.7 | 2.4 | 4.0 | 0.2 | |

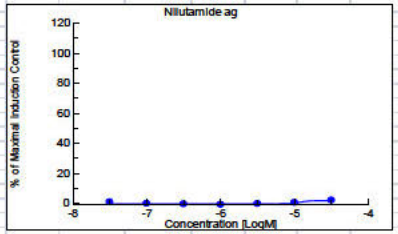



**Viability (% Control)**

| Nilutamide ag | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 102 | 100 | 101 | 103 | 104 | 102 | 102 | 98 | 97 | 84 | 61 |
| StdDev | 2 | 4 | 6 | 7 | 10 | 5 | 7 | 3 | 6 | 5 | 1 |
| SEM | 1 | 1 | 2 | 3 | 4 | 2 | 3 | 1 | 2 | 2 | 0 |
| %CV | 2.2 | 3.6 | 5.7 | 6.9 | 9.2 | 4.9 | 6.5 | 3.2 | 6.1 | 6.4 | 2.0 |

Fit Chart: #intersect #Ok




0 Bottom
2.1 Top
-4.9 EC50
7.5 Hill slope

# Data Spreadsheets

| | | | | | | |
|---|---|---|---|---|---|---|
| Experiment date: | 13Oct2011 | | blank = no cells, vehicle control | | Spreadsheet locked on: | 11/10/2011 |
| TopCount Model 89912V, Serial# 408672 | | | neg. control = cells + vehicle, | | Green shaded areas unlocked cells for data entry | |
| 11/11/11 15:00 | | | Study Number: | 9070-100107ARTA | | |
| Assay Conducted by: | [redacted] | | Compound | Nil | | |

| Nilutamide ant | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 899650 | 17200 | 832500 | 774150 | 663050 | 436750 | 188500 | 67150 | 46100 | 43750 | 900 | with 1nM DHT |
| B | 50 | 893450 | 16250 | 801750 | 716400 | 772900 | 473700 | 164150 | 70350 | 44350 | 52950 | 1100 | with 1nM DHT |
| C | 50 | 868950 | 13000 | 723250 | 766800 | 651400 | 510650 | 165000 | 66950 | 40500 | 44400 | 1500 | with 1nM DHT |
| D | 50 | 736050 | 13850 | 667950 | 673400 | 611100 | 480650 | 144500 | 54550 | 34350 | 48800 | 1750 | with 1nM DHT |
| E | 0 | 766100 | 864250 | 860200 | 734900 | 780700 | 1021950 | 817400 | 969550 | 903400 | 737700 | 9500 | with 1000nM DHT |
| F | 50 | 867000 | 751650 | 869250 | 803850 | 846700 | 873800 | 931100 | 985650 | 904700 | 869600 | 8400 | with 1000nM DHT |
| G | 0 | 876650 | 808700 | 782050 | 821750 | 969700 | 1063400 | 872550 | 972350 | 942300 | 890250 | 10350 | with 1000nM DHT |
| H | 0 | 823650 | 821600 | 769350 | 824000 | 969750 | 1077250 | 849150 | 1110550 | 1207050 | 863900 | 10000 | with 1000nM DHT |
| | | | | | | | | | | | | | Fold Induction (1nM DH |
| Mean | 38 | 849525 | 15075 | 756363 | 732688 | 674613 | 475438 | 165538 | 64750 | 41325 | 47475 | 1313 | |
| Std Dev | 25 | 76802 | 1975 | 74767 | 47128 | 69202 | 30369 | 18001 | 6976 | 5205 | 4284 | 384 | |
| SEM | 13 | 38401 | 988 | 37383 | 23564 | 34601 | 15185 | 9000 | 3488 | 2603 | 2142 | 192 | |
| CV% | 66.7 | 9.0 | 13.1 | 9.9 | 6.4 | 10.3 | 6.4 | 10.9 | 10.8 | 12.6 | 9.0 | 29.2 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 0.9 | 0.8 | 0.6 | 0.2 | 0.1 | 0.0 | 0.1 | 0.0 | Fold Induction (1000nM |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 843960 | 811725 | 820213 | 821125 | 891713 | 1009100 | 867550 | 1009575 | 989863 | 695363 | 9638 | |
| Std Dev | 25 | 46400 | 46721 | 51791 | 77173 | 94034 | 93210 | 48018 | 67692 | 145853 | 43072 | 856 | |
| SEM | 13 | 23200 | 23361 | 25896 | 38586 | 47012 | 46605 | 24009 | 33846 | 72926 | 21536 | 428 | |
| CV% | 200.0 | 5.5 | 5.8 | 6.3 | 9.4 | 10.5 | 9.2 | 5.5 | 6.7 | 14.7 | 6.2 | 8.9 | |

Mean VC 15075 Mean DHT 1000nM Control 811725

**Subtraction of VC from wells**

| Nilutamide ant | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -15075 | 884575 | 2125 | 817425 | 759075 | 647975 | 421675 | 173425 | 52075 | 31025 | 28675 | -14175 | with 1nM DHT |
| B | -15025 | 878375 | 1175 | 786675 | 701325 | 757825 | 458625 | 149075 | 55275 | 29275 | 37875 | -13975 | with 1nM DHT |
| C | -15025 | 853875 | -2075 | 708175 | 751725 | 636325 | 495575 | 149925 | 51875 | 25425 | 29325 | -13575 | with 1nM DHT |
| D | -15025 | 720975 | -1225 | 652875 | 658325 | 596025 | 465575 | 129425 | 39475 | 19275 | 33725 | -13325 | with 1nM DHT |
| E | -15075 | 771025 | 849875 | 845125 | 719825 | 765625 | 1006875 | 802325 | 954475 | 890325 | 742625 | -5375 | with 1000nM DHT |
| F | -15025 | 871925 | 736575 | 854175 | 788775 | 831625 | 858725 | 916025 | 970775 | 889625 | 654525 | -6675 | with 1000nM DHT |
| G | -15075 | 861775 | 793625 | 766975 | 906675 | 954625 | 1048325 | 857475 | 957275 | 927225 | 675175 | -4725 | with 1000nM DHT |
| H | -15075 | 808775 | 806525 | 754275 | 808925 | 954675 | 1062175 | 834075 | 1095475 | 1191975 | 648825 | -5075 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 800894

| Nilutamide ant | blank | 10nM DHT | neg. control | induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -15038 | 834450 | 0 | 741288 | 717613 | 659538 | 460363 | 150463 | 49675 | 26250 | 32400 | -13763 |
| Std Dev | 25 | 76802 | 1975 | 74767 | 47128 | 69202 | 30369 | 18001 | 6976 | 5205 | 4284 | 384 |
| SEM | 13 | 38401 | 988 | 37383 | 23564 | 34601 | 15185 | 9000 | 3488 | 2603 | 2142 | 192 |
| CV% | -0.2 | 9.2 | | 10.1 | 6.6 | 10.5 | 6.6 | 12.0 | 14.0 | 19.8 | 13.2 | -2.8 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 0.9 | 0.8 | 0.6 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))**

| Nilutamide ant | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.0 | 119.3 | 0.3 | 110.3 | 102.4 | 87.4 | 56.9 | 23.4 | 7.0 | 4.2 | 3.9 | -1.9 | with 1nM DHT |
| B | -2.0 | 118.5 | 0.2 | 106.1 | 94.6 | 102.2 | 61.9 | 20.1 | 7.5 | 3.9 | 5.1 | -1.9 | with 1nM DHT |
| C | -2.0 | 115.2 | -0.3 | 96.5 | 101.4 | 85.8 | 66.3 | 20.2 | 7.0 | 3.4 | 4.0 | -1.8 | with 1nM DHT |
| D | -2.0 | 97.3 | -0.2 | 88.1 | 88.8 | 80.4 | 62.8 | 17.5 | 5.3 | 2.5 | 4.5 | -1.8 | with 1nM DHT |
| E | -1.9 | 96.5 | 106.1 | 105.5 | 89.9 | 95.6 | 125.7 | 100.2 | 119.2 | 111.2 | 92.7 | -0.7 | with 1000nM DHT |
| F | -1.9 | 108.9 | 92.0 | 106.7 | 98.5 | 103.8 | 107.2 | 114.4 | 121.2 | 111.1 | 81.7 | -0.8 | with 1000nM DHT |
| G | -1.9 | 107.6 | 99.1 | 95.8 | 113.2 | 119.2 | 130.9 | 107.1 | 119.5 | 115.8 | 84.3 | -0.6 | with 1000nM DHT |
| H | -1.9 | 101.0 | 100.7 | 94.2 | 101.0 | 119.2 | 132.6 | 104.1 | 136.8 | 148.8 | 81.0 | -0.6 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Nilutamide ant | blank | 10nM DHT | neg. control | induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.0 | 112.6 | 0.0 | 100.0 | 96.8 | 89.0 | 62.1 | 20.3 | 6.7 | 3.5 | 4.4 | |
| Std Dev | 0.0 | 10.4 | 0.3 | 10.1 | 6.4 | 9.3 | 4.1 | 2.4 | 0.9 | 0.7 | 0.6 | |
| SEM | 0.0 | 5.2 | 0.1 | 5.0 | 3.2 | 4.7 | 2.0 | 1.2 | 0.5 | 0.4 | 0.3 | |

**High Agonist control, % of Maximal Induction Control (Average)**

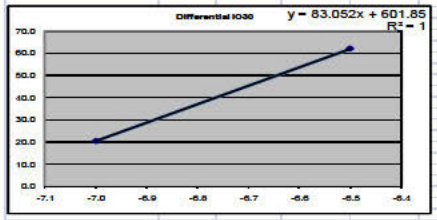
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.9 | 103.5 | 99.5 | 100.5 | 100.6 | 109.5 | 124.1 | 106.4 | 124.2 | 121.7 | 84.9 | |
| Std Dev | 0.0 | 5.8 | 5.8 | 6.5 | 9.6 | 11.7 | 11.6 | 6.0 | 8.5 | 18.2 | 5.4 | |
| SEM | 0.0 | 2.9 | 2.9 | 3.2 | 4.8 | 5.9 | 5.8 | 3.0 | 4.2 | 9.1 | 2.7 | |

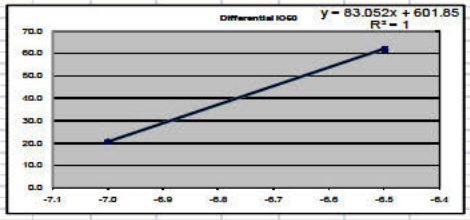
| Nilutamide ant | | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.1 | -9.1 | 99.5 | 0.5 | 3.8 | 20.5 | 62.0 | 86.1 | 117.5 | 118.2 | 80.6 | |

| Differential IC30 | -7.0 | -6.5 |
|---|---|---|
| | 20.5 | 62.0 |
| | -6.9 | |

| Differential IC60 | -7.0 | -6.5 |
|---|---|---|
| | 20.5 | 62.0 |
| | -6.6 | |

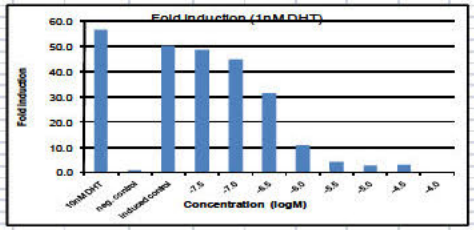
| Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|
| 100.0 | 3.5 | 96.5 |

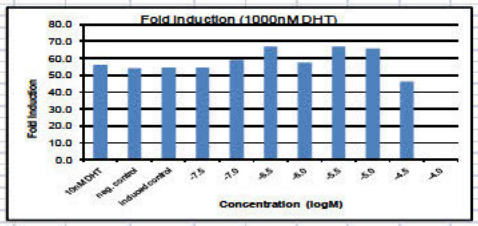



**FOLD INDUCTION**

| | 10nM DH | neg. control | induced cor | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 59.7 | 1.1 | 55.2 | 51.4 | 44.0 | 29.0 | 12.5 | 4.5 | 3.1 | 2.9 | 0.1 |
| | 59.3 | 1.1 | 53.2 | 47.5 | 51.3 | 31.4 | 10.9 | 4.7 | 2.9 | 3.5 | 0.1 |
| | 57.6 | 0.9 | 48.0 | 50.9 | 43.2 | 33.9 | 10.9 | 4.4 | 2.7 | 2.9 | 0.1 |
| | 48.8 | 0.9 | 44.3 | 44.7 | 40.5 | 31.9 | 9.6 | 3.6 | 2.3 | 3.2 | 0.1 |
| | 52.3 | 57.4 | 57.1 | 48.7 | 51.8 | 67.8 | 54.2 | 64.3 | 60.1 | 50.3 | 0.7 |
| | 58.8 | 49.9 | 57.7 | 53.3 | 56.2 | 58.0 | 61.8 | 65.4 | 60.0 | 44.4 | 0.6 |
| | 58.2 | 53.6 | 51.9 | 61.1 | 64.3 | 70.6 | 57.9 | 64.5 | 62.5 | 45.8 | 0.7 |
| | 54.7 | 54.5 | 51.0 | 54.7 | 64.3 | 71.5 | 56.3 | 73.7 | 80.1 | 44.0 | 0.7 |
| Mean | 56.4 | 1.0 | 50.2 | 48.6 | 44.8 | 31.5 | 11.0 | 4.3 | 2.7 | 3.1 | 0.1 |
| Std Dev | 5.1 | 0.1 | 5.0 | 3.1 | 4.6 | 2.0 | 1.2 | 0.5 | 0.3 | 0.3 | 0.0 |
| SEM | 2.5 | 0.1 | 2.5 | 1.6 | 2.3 | 1.0 | 0.6 | 0.2 | 0.2 | 0.1 | 0.0 |
| CV% | 9.0 | 13.1 | 9.9 | 6.4 | 10.3 | 6.4 | 10.9 | 10.6 | 12.6 | 9.0 | 29.2 |
| Relative Tran | 100 | 1.8 | 89.0 | 86.2 | 79.4 | 56.0 | 19.5 | 7.6 | 4.9 | 5.6 | 0.2 |
| Mean | 56.0 | 53.8 | 54.4 | 54.5 | 59.2 | 66.9 | 57.5 | 67.0 | 65.7 | 46.1 | 0.6 |
| Std Dev | 3.1 | 3.1 | 3.4 | 5.1 | 6.2 | 6.2 | 3.2 | 4.5 | 9.7 | 2.9 | 0.1 |
| SEM | 1.5 | 1.5 | 1.7 | 2.6 | 3.1 | 3.1 | 1.6 | 2.2 | 4.8 | 1.4 | 0.0 |
| CV% | 5.5 | 5.6 | 6.3 | 9.4 | 10.5 | 9.2 | 5.5 | 6.7 | 14.7 | 6.2 | 8.9 |
| Relative Tran | 100 | 96.2 | 97.2 | 97.3 | 105.7 | 119.6 | 102.8 | 119.6 | 117.3 | 82.4 | 1.1 |

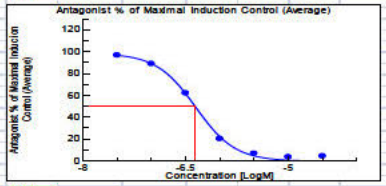



**Viability (% Control)**

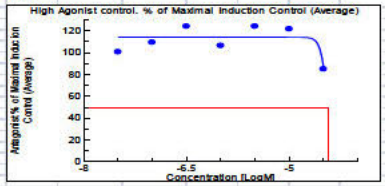
| Nilutamide ant | 10nM DHT | neg. cont | induced c | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 102 | 100 | 101 | 103 | 104 | 102 | 102 | 98 | 97 | 84 | 61 |
| StdDev | 2 | 4 | 6 | 7 | 10 | 5 | 7 | 3 | 6 | 5 | 4 |
| SEM | 1 | 1 | 3 | 4 | 5 | 3 | 4 | 2 | 3 | 2 | 2 |
| %CV | 2.2 | 3.6 | 5.7 | 6.9 | 9.2 | 4.9 | 6.5 | 3.2 | 6.1 | 6.4 | 2.6 |

Fit Chart -6.4 #Ok




0 Bottom
98.7 Top
-6.4 EC50
-1.5 Hill slope

Fit Chart >-4.5 #Ok




0 Bottom
114.4 Top
-4.4 EC50
-8.6 Hill slope

# Data Spreadsheets

Experiment date: 20Oct2011
TopCount Model B9912V, Serial# 408672
11/11/11 15:26
Assay Conducted by: [redacted]

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound Nilutamide (Nil)

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Nilutamide | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 100 | 594800 | 10000 | 8250 | 6950 | 4550 | 5250 | 3200 | 7800 | 11650 | 23250 | 800 | |
| B | 50 | 625900 | 9850 | 9950 | 7650 | 4600 | 5200 | 3650 | 7000 | 11350 | 23950 | 750 | |
| C | 50 | 540850 | 9400 | 8550 | 7250 | 5500 | 4700 | 4050 | 9700 | 11350 | 23150 | 300 | |
| D | 0 | 506100 | 8950 | 9400 | 7650 | 5350 | 5700 | 5050 | 8150 | 12150 | 23600 | 500 | |
| E | 0 | 600950 | 11100 | 7250 | 8150 | 5550 | 5550 | 5650 | 8550 | 12050 | 24600 | 650 | |
| F | 0 | 592200 | 9550 | 8050 | 5850 | 5000 | 6900 | 5000 | 7750 | 13100 | 18850 | 550 | |
| G | *0* | *236700* | *13800* | *17000* | *17050* | *15850* | *18700* | *20300* | *25150* | *42100* | *23300* | *300* | with 10µM Nilutamide |
| H | *0* | *219700* | *15000* | *15650* | *14550* | *13900* | *15650* | *14350* | *23650* | *22800* | *18250* | *250* | with 10µM Nilutamide |
| Mean | 33 | 576800 | 9192 | | 7250 | 5092 | 5550 | 4433 | 8158 | 11942 | 22900 | 592 | |
| Std Dev | 41 | 44376 | 1042 | | 797 | 444 | 746 | 945 | 913 | 661 | 2053 | 183 | |
| SEM | 17 | 18116 | 301 | | 326 | 181 | 304 | 386 | 373 | 270 | 838 | 75 | |
| CV% | *122.5* | *7.7* | *11.34* | | *11.0* | *8.7* | *13.4* | *21.3* | *11.2* | *5.5* | *9.0* | *30.9* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 228200 | 15363 | | 15800 | 14875 | 17175 | 17325 | 24400 | 32450 | 20775 | 275 | |
| Std Dev | 0 | 12021 | 1334 | | 1768 | 1379 | 2157 | 4207 | 1061 | 13647 | 3571 | 35 | |

Mean VC 9192 Mean Nilutamide Control 15363

**Subtraction of VC from wells**

| Nilutamide | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 100 | 585608 | 808 | -942 | -2242 | -4642 | -3942 | -5992 | -1392 | 2458 | 14058 | -8392 | |
| B | 50 | 616708 | 658 | 758 | -1542 | -4592 | -3992 | -5542 | -2192 | 2158 | 14758 | -8442 | |
| C | 50 | 531658 | 208 | -642 | -1942 | -3692 | -4492 | -5142 | 508 | 2158 | 13958 | -8892 | |
| D | 0 | 496908 | -242 | 208 | -1542 | -3842 | -3492 | -4142 | -1042 | 2958 | 14408 | -8692 | |
| E | 0 | 591758 | 1908 | -1942 | -1042 | -3642 | -3642 | -3542 | -642 | 2858 | 15408 | -8542 | |
| F | 0 | 583008 | 358 | -1142 | -3342 | -4192 | -2292 | -4192 | -1442 | 3908 | 9658 | -8642 | |
| G | 0 | 221338 | -1563 | 1638 | 1688 | 488 | 3338 | 4938 | 9788 | 26738 | 7938 | -15063 | with 10µM Nilutamide |
| H | 0 | 204338 | -363 | 288 | -813 | -1463 | 288 | -1013 | 8288 | 7438 | 2888 | -15113 | with 10µM Nilutamide |

**Corrected Data Means**

| Nilutamide | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 33 | 567608 | 0 | | -1942 | -4100 | -3642 | -4758 | -1033 | 2750 | 13708 | -8600 |
| Std Dev | 41 | 44376 | 1042 | | 797 | 444 | 746 | 945 | 913 | 661 | 2053 | 183 |
| SEM | 17 | 18116 | 301 | | 326 | 181 | 304 | 386 | 373 | 270 | 838 | 75 |
| CV% | *122.5* | *7.8* | | | *-41.1* | *-10.8* | *-20.5* | *-19.9* | *-88.3* | *24.0* | *15.0* | *-2.1* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

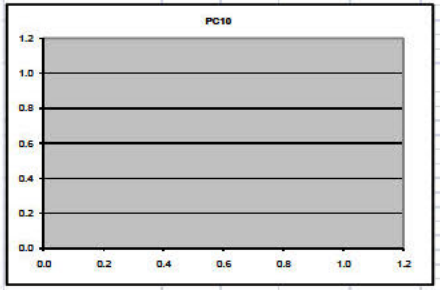
**Agonist: % of Maximal Induction Control**

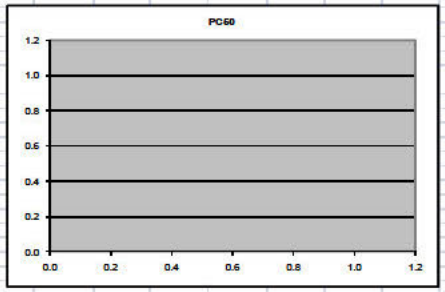
| Nilutamide | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 103.2 | 0.1 | -0.2 | -0.4 | -0.8 | -0.7 | -1.1 | -0.2 | 0.4 | 2.5 | -1.5 | |
| B | 0.0 | 108.7 | 0.1 | 0.1 | -0.3 | -0.8 | -0.7 | -1.0 | -0.4 | 0.4 | 2.6 | -1.5 | |
| C | 0.0 | 93.7 | 0.0 | -0.1 | -0.3 | -0.7 | -0.8 | -0.9 | 0.1 | 0.4 | 2.5 | -1.6 | |
| D | 0.0 | 87.5 | 0.0 | 0.0 | -0.3 | -0.7 | -0.6 | -0.7 | -0.2 | 0.5 | 2.5 | -1.5 | |
| E | 0.0 | 104.3 | 0.3 | -0.3 | -0.2 | -0.6 | -0.6 | -0.6 | -0.1 | 0.5 | 2.7 | -1.5 | |
| F | 0.0 | 102.7 | 0.1 | -0.2 | -0.6 | -0.7 | -0.4 | -0.7 | -0.3 | 0.7 | 1.7 | -1.5 | |
| G | 0.0 | 39.0 | -0.3 | 0.3 | 0.3 | 0.1 | 0.6 | 0.9 | 1.7 | 4.7 | 1.4 | -2.7 | with 10µM Nilutamide |
| H | 0.0 | 36.0 | -0.1 | 0.1 | -0.1 | -0.3 | 0.1 | -0.2 | 1.5 | 1.3 | 0.5 | -2.7 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Nilutamide | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | -0.3 | -0.7 | -0.6 | -0.8 | -0.2 | 0.5 | 2.4 | |
| Std Dev | 0.0 | 7.8 | 0.2 | | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.4 | |
| SEM | 0.0 | 3.2 | 0.1 | | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | |

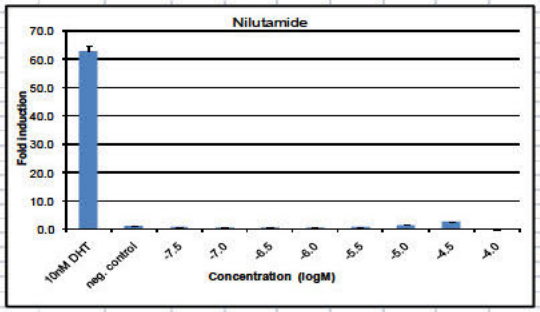
PC10 PC50

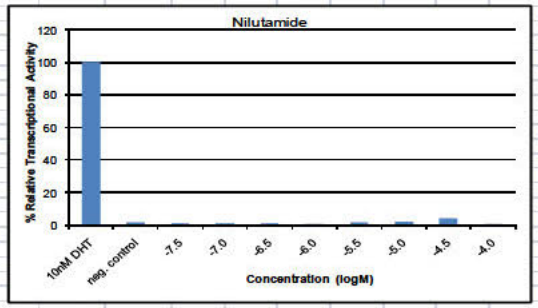



**FOLD INDUCTION**

| | 10nM DH | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 64.7 | 1.1 | 0.9 | 0.8 | 0.5 | 0.6 | 0.3 | 0.8 | 1.3 | 2.5 | 0.1 |
| | 68.1 | 1.1 | 1.1 | 0.8 | 0.5 | 0.6 | 0.4 | 0.8 | 1.2 | 2.6 | 0.1 |
| | 58.8 | 1.0 | 0.9 | 0.8 | 0.6 | 0.5 | 0.4 | 1.1 | 1.2 | 2.5 | 0.0 |
| | 55.1 | 1.0 | 1.0 | 0.8 | 0.6 | 0.6 | 0.5 | 0.9 | 1.3 | 2.6 | 0.1 |
| | 65.4 | 1.2 | 0.8 | 0.9 | 0.6 | 0.6 | 0.6 | 0.9 | 1.3 | 2.7 | 0.1 |
| | 64.4 | 1.0 | 0.9 | 0.6 | 0.5 | 0.8 | 0.5 | 0.8 | 1.4 | 2.1 | 0.1 |
| Mean | 62.8 | 1.0 | | 0.8 | 0.6 | 0.6 | 0.5 | 0.9 | 1.3 | 2.5 | 0.1 |
| Std Dev | 4.8 | 0.1 | | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 |
| SEM | 2.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| CV% | *7.7* | *11.3* | | *11.0* | *8.7* | *13.4* | *21.3* | *11.2* | *5.5* | *9.0* | *30.9* |
| Relative Tran | 100 | 1.6 | | 1.3 | 0.9 | 1.0 | 0.8 | 1.4 | 2.1 | 4.0 | 0.1 |

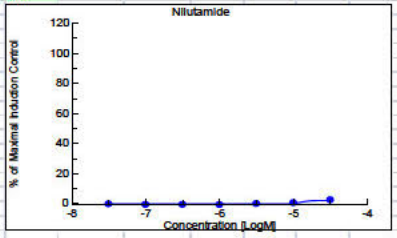



**Viability (% Control)**

| Nilutamide | 10nM DHT | neg. cont | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 100 | 100 | 105 | 102 | 103 | 92 | 99 | 96 | 99 | 83 | 66 |
| StdDev | 7 | 7 | 7 | 2 | 7 | 4 | 5 | 6 | 5 | 4 | 3 |
| SEM | 3 | 3 | 3 | 1 | 3 | 1 | 2 | 2 | 2 | 1 | 1 |
| %CV | 6.5 | 6.8 | 6.2 | 1.8 | 6.7 | 3.9 | 5.1 | 6.2 | 5.3 | 4.3 | 3.9 |

Fit #interse
ct
Chart #Ok




0 Bottom
2.4 Top
-4.9 EC50
6.7 Hill slope

Study Number: 9070-100107ARTA

# Data Spreadsheets

Experiment date: 20Oct2011
TopCount Model B5912V, Serial# 408672
11/11/11 15:26
Assay Conducted by: [redacted]

blank = no cells, vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound: Nilutamide (Nil)

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| Nilutamide | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 555800 | 10750 | 470150 | 501550 | 373450 | 362450 | 102950 | 36450 | 22950 | 23550 | 750 | with 1nM DHT |
| B | 50 | 522750 | 9650 | 405200 | 410200 | 419900 | 289900 | 87400 | 38300 | 24300 | 28500 | 550 | with 1nM DHT |
| C | 100 | 484650 | 8650 | 421100 | 425100 | 376550 | 348200 | 79250 | 33750 | 23200 | 24600 | 200 | with 1nM DHT |
| D | 100 | 409850 | 6800 | 362050 | 367050 | 325650 | 226350 | 84800 | 32400 | 24300 | 19400 | 250 | with 1nM DHT |
| E | *0* | *401300* | *386750* | *379900* | *395800* | *393600* | *396900* | *434200* | *456400* | *491300* | *376050* | *1250* | with 1000nM DHT |
| F | *50* | *369700* | *416500* | *419900* | *477050* | *389050* | *436550* | *410350* | *443950* | *427250* | *329400* | *1250* | with 1000nM DHT |
| G | *50* | *463730* | *420100* | *378050* | *465050* | *370900* | *386800* | *444000* | *492050* | *523150* | *304050* | *1800* | with 1000nM DHT |
| H | *0* | *422600* | *420950* | *386500* | *358450* | *465950* | *403250* | *407500* | *469000* | *473100* | *306200* | *650* | with 1000nM DHT |
| Mean | 75 | 493263 | 8963 | 414625 | 425975 | 373888 | 281725 | 88600 | 35225 | 23688 | 24013 | 438 | Fold Induction (1nM DH |
| Std Dev | 29 | 62749 | 1677 | 44639 | 56075 | 38520 | 59927 | 10153 | 2653 | 715 | 3740 | 259 | |
| SEM | 14 | 31374 | 839 | 22319 | 28038 | 19260 | 29963 | 5076 | 1326 | 357 | 1870 | 130 | |
| CV% | *36.5* | *12.7* | *18.7* | *10.8* | *13.2* | *10.3* | *21.3* | *11.5* | *7.5* | *3.0* | *15.6* | *30.3* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.8 | 0.6 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | |
| Rows E-H | | | | | | | | | | | | | Fold Induction (1000nM |
| Mean | 25 | 419338 | 413825 | 376588 | 429088 | 404875 | 406375 | 421513 | 470850 | 478750 | 310925 | 1288 | |
| Std Dev | 29 | 48128 | 17512 | 41767 | 61994 | 41881 | 21287 | 16672 | 23149 | 40075 | 12966 | 390 | |
| SEM | 14 | 24064 | 8756 | 20884 | 30997 | 20940 | 10643 | 8336 | 11575 | 20038 | 6483 | 195 | |
| CV% | *113.3* | *11.5* | *4.2* | *11.1* | *14.4* | *10.3* | *5.2* | *4.0* | *4.9* | *8.4* | *4.2* | *30.3* | |

Mean VC: 8963 — Mean DHT 1000nM Control: 413825

**Subtraction of VC from wells**

| Nilutamide | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -8913 | 546838 | 1788 | 461188 | 492588 | 364488 | 353488 | 93988 | 27488 | 13988 | 14688 | -8213 | with 1nM DHT |
| B | -8913 | 513788 | 688 | 396238 | 401238 | 410938 | 280938 | 78438 | 29338 | 15338 | 19538 | -8413 | with 1nM DHT |
| C | -8863 | 475688 | -313 | 412138 | 416138 | 367588 | 239238 | 70288 | 24788 | 14238 | 15638 | -8763 | with 1nM DHT |
| D | -8863 | 400888 | -2163 | 353088 | 358088 | 316688 | 217388 | 75838 | 23438 | 15338 | 10438 | -8713 | with 1nM DHT |
| E | -8963 | 392338 | 379788 | 310938 | 386638 | 384638 | 389938 | 415238 | 447438 | 482538 | 301088 | -7713 | with 1000nM DHT |
| F | -8913 | 360738 | 407538 | 410938 | 468088 | 380088 | 427588 | 401388 | 436988 | 418288 | 320438 | -7713 | with 1000nM DHT |
| G | -8913 | 474788 | 420138 | 369088 | 476088 | 361938 | 377838 | 435038 | 483088 | 514188 | 296088 | -7163 | with 1000nM DHT |
| H | -8963 | 413638 | 411988 | 379538 | 349488 | 456988 | 394288 | 398538 | 480038 | 464138 | 291238 | -8113 | with 1000nM DHT |

**VC Corrected Data Means** — AVG cntrl: 386244

| Nilutamide | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -8888 | 484300 | 0 | 405663 | 417013 | 364925 | 272763 | 79638 | 26263 | 14725 | 15050 | -8525 |
| Std Dev | 29 | 62749 | 1677 | 44639 | 56075 | 38520 | 59927 | 10153 | 2653 | 715 | 3740 | 259 |
| SEM | 14 | 31374 | 839 | 22319 | 28038 | 19260 | 29963 | 5076 | 1326 | 357 | 1870 | 130 |
| CV% | *-0.3* | *13.0* | | *11.0* | *13.4* | *10.6* | *22.0* | *12.7* | *10.1* | *4.9* | *24.9* | *-3.0* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.8 | 0.6 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))**

| Nilutamide | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.2 | 134.8 | 0.4 | 113.7 | 121.4 | 89.8 | 87.1 | 23.2 | 6.8 | 3.4 | 3.6 | -2.0 | with 1nM DHT |
| B | -2.2 | 126.7 | 0.2 | 97.7 | 98.9 | 101.3 | 69.3 | 19.3 | 7.2 | 3.8 | 4.8 | -2.1 | with 1nM DHT |
| C | -2.2 | 117.3 | -0.1 | 101.6 | 102.6 | 90.6 | 59.0 | 17.3 | 6.1 | 3.5 | 3.9 | -2.2 | with 1nM DHT |
| D | -2.2 | 98.8 | -0.5 | 87.0 | 88.3 | 78.1 | 53.6 | 18.7 | 5.8 | 3.8 | 2.6 | -2.1 | with 1nM DHT |
| E | -2.3 | 101.6 | 98.3 | 80.5 | 100.2 | 99.5 | 101.6 | 107.5 | 115.8 | 124.9 | 78.0 | -2.0 | with 1000nM DHT |
| F | -2.3 | 93.4 | 105.5 | 106.4 | 121.2 | 98.4 | 110.7 | 103.9 | 113.1 | 108.3 | 83.0 | -2.0 | with 1000nM DHT |
| G | -2.3 | 122.9 | 108.8 | 95.6 | 123.3 | 93.7 | 97.8 | 112.6 | 125.1 | 133.1 | 76.4 | -1.9 | with 1000nM DHT |
| H | -2.3 | 107.1 | 106.7 | 98.3 | 90.5 | 118.3 | 102.1 | 103.2 | 124.3 | 120.2 | 75.4 | -2.1 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| Nilutamide | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.2 | 119.4 | 0.0 | 100.0 | 102.8 | 90.0 | 67.2 | 19.6 | 6.5 | 3.6 | 3.7 | |
| Std Dev | 0.0 | 15.5 | 0.4 | 11.0 | 13.8 | 9.5 | 14.8 | 2.5 | 0.7 | 0.2 | 0.9 | |
| SEM | 0.0 | 7.7 | 0.2 | 5.5 | 6.9 | 4.7 | 7.4 | 1.3 | 0.3 | 0.1 | 0.5 | |

**High Agonist control, % of Maximal Induction Control (Average)**

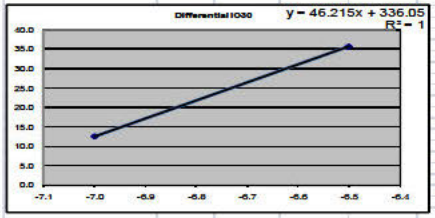
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.3 | 106.2 | 104.8 | 95.2 | 108.8 | 102.5 | 102.9 | 106.8 | 119.6 | 121.6 | 78.2 | |
| Std Dev | 0.0 | 12.5 | 4.5 | 10.8 | 16.1 | 10.8 | 5.5 | 4.3 | 6.0 | 10.4 | 3.4 | |
| SEM | 0.0 | 6.2 | 2.3 | 5.4 | 8.0 | 5.4 | 2.8 | 2.2 | 3.0 | 5.2 | 1.7 | |

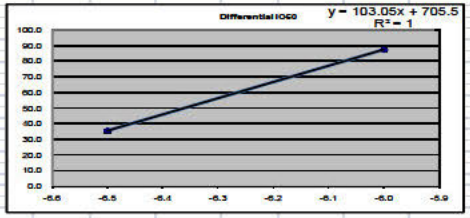
| Nilutamide Differential | -0.1 | -13.1 | 104.8 | -4.8 | -7.5 6.0 | -7.0 12.5 | -6.5 35.7 | -6.0 87.2 | -5.5 113.1 | -5.0 118.0 | -4.5 74.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

| Differential IC30 | -7.0 | -6.5 |
|---|---|---|
| | 12.5 | 35.7 |
| | -6.6 | |

| Differential IC50 | -6.5 | -6.0 |
|---|---|---|
| | 35.7 | 87.2 |
| | -6.4 | |

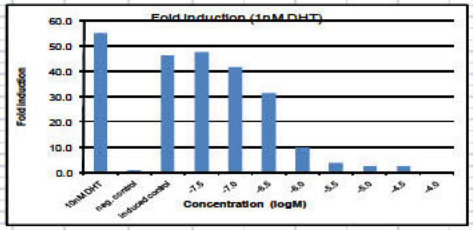
| Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|
| 100.0 | 3.6 | 96.4 |

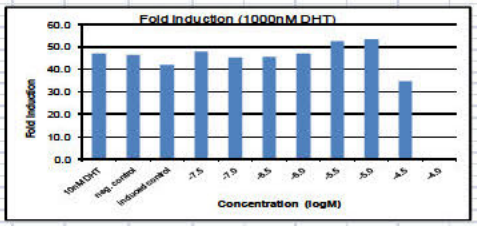



**FOLD INDUCTION**

| | 10nM DH | neg. control | Induced cor | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 62.0 | 1.2 | 52.5 | 56.0 | 41.7 | 40.4 | 11.5 | 4.1 | 2.6 | 2.6 | 0.1 |
| | 58.3 | 1.1 | 45.2 | 45.8 | 46.9 | 32.3 | 9.8 | 4.3 | 2.7 | 3.2 | 0.1 |
| | 54.1 | 1.0 | 47.0 | 47.4 | 42.0 | 27.7 | 8.5 | 3.8 | 2.6 | 2.7 | 0.0 |
| | 45.7 | 0.8 | 40.4 | 41.0 | 36.3 | 25.3 | 9.5 | 3.6 | 2.7 | 2.2 | 0.0 |
| | *44.8* | *43.4* | *35.7* | *44.2* | *43.9* | *44.5* | *47.3* | *50.9* | *54.8* | *34.6* | *0.1* |
| | 41.2 | 46.5 | 46.9 | 53.2 | 43.4 | 48.7 | 45.8 | 49.8 | 47.7 | 36.8 | 0.1 |
| | 54.0 | 47.9 | 42.2 | 54.1 | 41.4 | 43.2 | 49.5 | 54.9 | 58.4 | 33.9 | 0.2 |
| | 47.2 | 47.0 | 43.3 | 40.0 | 52.0 | 45.0 | 45.5 | 54.6 | 52.8 | 33.5 | 0.1 |
| Mean | 55.0 | 1.0 | 46.3 | 47.5 | 41.7 | 31.4 | 9.9 | 3.9 | 2.6 | 2.7 | 0.0 |
| Std Dev | 7.0 | 0.2 | 5.6 | 6.3 | 4.9 | 6.7 | 1.1 | 0.3 | 0.1 | 0.4 | 0.0 |
| SEM | 3.5 | 0.1 | 2.5 | 3.1 | 2.1 | 3.3 | 0.6 | 0.1 | 0.0 | 0.2 | 0.0 |
| CV% | *12.7* | *18.7* | *10.8* | *13.2* | *10.3* | *21.3* | *11.5* | *7.5* | *3.0* | *15.6* | *30.3* |
| Relative Trar | 100 | 1.8 | 84.1 | 86.4 | 75.8 | 57.1 | 18.0 | 7.1 | 4.8 | 4.9 | 0.1 |
| Mean | 46.8 | 46.2 | 42.0 | 47.9 | 45.2 | 45.3 | 47.0 | 52.5 | 53.4 | 34.7 | 0.1 |
| Std Dev | 5.4 | 2.0 | 4.7 | 6.9 | 4.7 | 2.4 | 1.9 | 2.6 | 4.5 | 1.4 | 0.0 |
| SEM | 2.7 | 1.0 | 2.3 | 3.5 | 2.3 | 1.2 | 0.9 | 1.3 | 2.2 | 0.7 | 0.0 |
| CV% | *11.5* | *4.2* | *11.1* | *14.4* | *10.3* | *5.2* | *4.0* | *4.9* | *8.4* | *4.2* | *30.3* |
| Relative Trar | 100 | 98.7 | 89.8 | 102.3 | 96.6 | 96.9 | 100.5 | 112.3 | 114.2 | 74.1 | 0.3 |

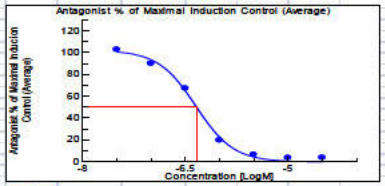



**Viability (% Control)**

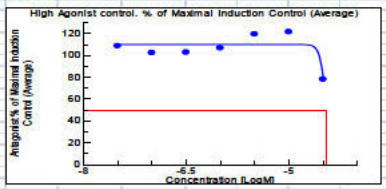
| Nilutamide | 10nM DHT | neg. cont | Induced c | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 100 | 100 | 105 | 102 | 103 | 92 | 99 | 96 | 99 | 83 | 66 |
| StdDev | 7 | 7 | 7 | 2 | 7 | 4 | 5 | 6 | 5 | 4 | 3 |
| SEM | 3 | 3 | 3 | 1 | 3 | 1 | 2 | 2 | 2 | 1 | 1 |
| %CV | 6.5 | 6.8 | 6.2 | 1.8 | 6.7 | 3.9 | 5.1 | 6.2 | 5.3 | 4.3 | 3.9 |

Fit Chart: -6.3 #Ok




0 Bottom
102.3 Top
-6.4 EC50
-1.6 Hill slope

Fit Chart: >-4.5 #Ok




0 Bottom
110.4 Top
-4.5 EC50
-9.5 Hill slope

# Data Spreadsheets



| | | | |
|---|---|---|---|
| Experiment date: | 3Nov2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:26 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | [redacted] | Compound | Nilutamide (Nil) |

| Nilutamide Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 183400 | 3500 | 4050 | 2450 | 3550 | 3150 | 4650 | 3800 | 8650 | 10800 | 1150 | |
| B | 50 | 303350 | 5050 | 3450 | 3450 | 2300 | 3200 | 2550 | 6600 | 10450 | 13050 | 2350 | |
| C | 50 | 263700 | 3750 | 3550 | 3600 | 3300 | 3500 | 2250 | 5750 | 8200 | 11100 | 1500 | |
| D | 0 | 328850 | 5300 | 4250 | 4150 | 4150 | 4450 | 4500 | 6300 | 7500 | 10750 | 2550 | |
| E | 0 | 241450 | 5800 | 3950 | 3000 | 4500 | 4550 | 2850 | 5550 | 10850 | 14200 | 3750 | |
| F | 0 | 278650 | 5000 | 4750 | 4000 | 4200 | 4150 | 3900 | 5150 | 9700 | 11650 | 2400 | |
| G | *50* | *109150* | *23400* | *8150* | *17850* | *16600* | *9900* | *9400* | *15900* | *18450* | *10500* | *1350* | with 10µM Nilutamide |
| H | *50* | *99150* | *6300* | *5150* | *7450* | *9500* | *7550* | *6400* | *9300* | *14850* | *8550* | *1200* | with 10µM Nilutamide |
| Mean | 17 | 266567 | 4367 | | 3442 | 3667 | 3833 | 3450 | 5525 | 9225 | 11925 | 2283 | |
| Std Dev | 26 | 50861 | 790 | | 635 | 804 | 628 | 1035 | 992 | 1321 | 1403 | 910 | |
| SEM | 11 | 20764 | 228 | | 259 | 328 | 256 | 422 | 405 | 539 | 573 | 371 | |
| CV% | *154.9* | *19.1* | *18.09* | | *18.5* | *21.9* | *16.4* | *30.0* | *18.0* | *14.3* | *11.8* | *39.8* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 50 | 104150 | 10750 | | 12650 | 13050 | 8725 | 7900 | 12600 | 16650 | 9525 | 1275 | |
| Std Dev | 0 | 7071 | 8523 | | 7354 | 5020 | 1662 | 2121 | 4667 | 2546 | 1379 | 106 | |

Mean VC 4367 Mean Nilutamide Control 10750

**Subtraction of VC from wells**

| Nilutamide Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 179033 | -867 | -317 | -1917 | -817 | -1217 | 283 | -567 | 4283 | 6433 | -3217 | |
| B | 50 | 298983 | 683 | -917 | -917 | -2067 | -1167 | -1817 | 2233 | 6083 | 8683 | -2017 | |
| C | 50 | 259333 | -617 | -817 | -767 | -1067 | -867 | -2117 | 1383 | 3833 | 6733 | -2867 | |
| D | 0 | 324483 | 933 | -117 | -217 | -217 | 83 | 133 | 1933 | 3133 | 6383 | -1817 | |
| E | 0 | 237083 | 1433 | -417 | -1367 | 133 | 183 | -1517 | 1183 | 6483 | 9833 | -617 | |
| F | 0 | 274283 | 633 | 383 | -367 | -167 | -217 | -467 | 783 | 5333 | 7283 | -1967 | |
| G | 50 | 98400 | 12650 | -2600 | 7100 | 5850 | -850 | -1350 | 5150 | 7700 | -250 | -9400 | with 10µM Nilutamide |
| H | 50 | 88400 | -4450 | -5600 | -3300 | -1250 | -3200 | -4350 | -1450 | 4100 | -2200 | -9550 | with 10µM Nilutamide |

**Corrected Data Means**

| Nilutamide Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 17 | 262200 | 0 | | -925 | -700 | -533 | -917 | 1158 | 4858 | 7558 | -2083 |
| Std Dev | 26 | 50861 | 790 | | 635 | 804 | 628 | 1035 | 992 | 1321 | 1403 | 910 |
| SEM | 11 | 20764 | 228 | | 259 | 328 | 256 | 422 | 405 | 539 | 573 | 371 |
| CV% | *154.9* | *19.4* | | | *-68.7* | *-114.8* | *-117.8* | *-112.9* | *85.7* | *27.2* | *18.6* | *-43.7* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

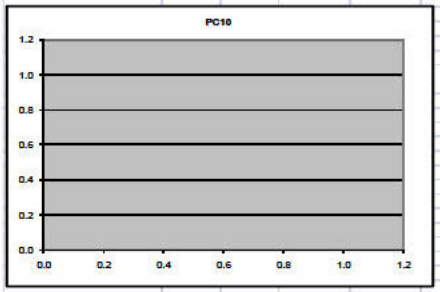
**Agonist: % of Maximal Induction Control**

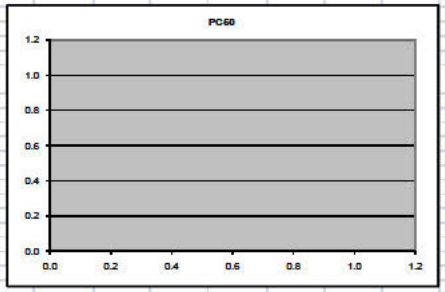
| Nilutamide Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 68.3 | -0.3 | -0.1 | -0.7 | -0.3 | -0.5 | 0.1 | -0.2 | 1.6 | 2.5 | -1.2 | |
| B | 0.0 | 114.0 | 0.3 | -0.3 | -0.3 | -0.8 | -0.4 | -0.7 | 0.9 | 2.3 | 3.3 | -0.8 | |
| C | 0.0 | 98.9 | -0.2 | -0.3 | -0.3 | -0.4 | -0.3 | -0.8 | 0.5 | 1.5 | 2.6 | -1.1 | |
| D | 0.0 | 123.8 | 0.4 | 0.0 | -0.1 | -0.1 | 0.0 | 0.1 | 0.7 | 1.2 | 2.4 | -0.7 | |
| E | 0.0 | 90.4 | 0.5 | -0.2 | -0.5 | 0.1 | 0.1 | -0.6 | 0.5 | 2.5 | 3.8 | -0.2 | |
| F | 0.0 | 104.6 | 0.2 | 0.1 | -0.1 | -0.1 | -0.1 | -0.2 | 0.3 | 2.0 | 2.8 | -0.8 | |
| G | 0.0 | 37.5 | 4.8 | -1.0 | 2.7 | 2.2 | -0.3 | -0.5 | 2.0 | 2.9 | -0.1 | -3.6 | with 10µM Nilutamide |
| H | 0.0 | 33.7 | -1.7 | -2.1 | -1.3 | -0.5 | -1.2 | -1.7 | -0.6 | 1.6 | -0.8 | -3.6 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| Nilutamide Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | -0.4 | -0.3 | -0.2 | -0.3 | 0.4 | 1.9 | 2.9 | |
| Std Dev | 0.0 | 19.4 | 0.3 | | 0.2 | 0.3 | 0.2 | 0.4 | 0.4 | 0.5 | 0.5 | |
| SEM | 0.0 | 7.9 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | |

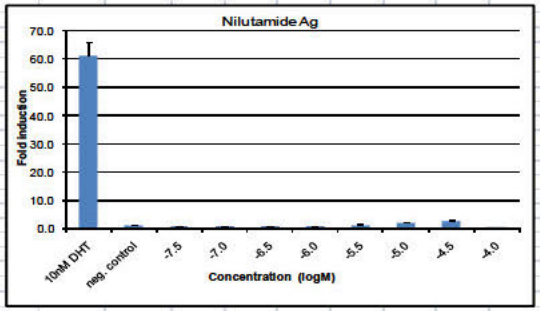
PC10 PC50

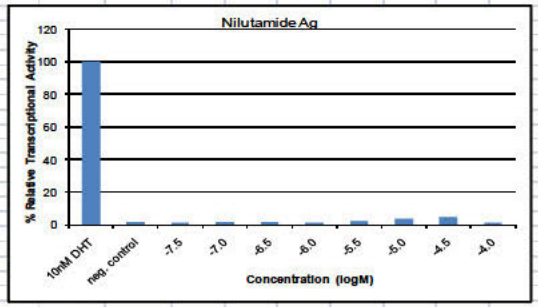



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 42.0 | 0.8 | 0.9 | 0.6 | 0.8 | 0.7 | 1.1 | 0.9 | 2.0 | 2.5 | 0.3 |
| | 69.5 | 1.2 | 0.8 | 0.8 | 0.5 | 0.7 | 0.6 | 1.5 | 2.4 | 3.0 | 0.5 |
| | 60.4 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.5 | 1.3 | 1.9 | 2.5 | 0.3 |
| | 75.3 | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.4 | 1.7 | 2.5 | 0.6 |
| | 55.3 | 1.3 | 0.9 | 0.7 | 1.0 | 1.0 | 0.7 | 1.3 | 2.5 | 3.3 | 0.9 |
| | 63.8 | 1.1 | 1.1 | 0.9 | 1.0 | 1.0 | 0.9 | 1.2 | 2.2 | 2.7 | 0.5 |
| Mean | 61.0 | 1.0 | | 0.8 | 0.8 | 0.9 | 0.8 | 1.3 | 2.1 | 2.7 | 0.5 |
| Std Dev | 11.6 | 0.2 | | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 |
| SEM | 4.8 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| CV% | *19.1* | *18.1* | | *18.5* | *21.9* | *16.4* | *30.0* | *18.0* | *14.3* | *11.8* | *39.8* |
| Relative Tran | 100 | 1.6 | | 1.3 | 1.4 | 1.4 | 1.3 | 2.1 | 3.5 | 4.5 | 0.9 |

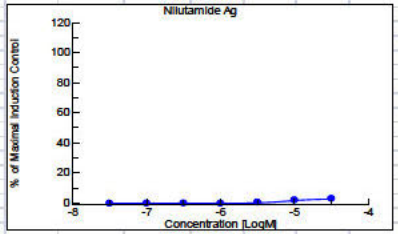



**Viability (% Control)**

| Nilutamide Ag | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 92 | 100 | 101 | 98 | 101 | 101 | 92 | 98 | 97 | 95 | 56 |
| StdDev | 7 | 8 | 10 | 10 | 13 | 10 | 7 | 10 | 11 | 3 | 4 |
| SEM | 3 | 3 | 4 | 4 | 5 | 4 | 3 | 4 | 5 | 1 | 2 |
| %CV | 7.4 | 8.3 | 10.4 | 10.2 | 13.3 | 10.3 | 7.9 | 10.3 | 11.7 | 2.9 | 7.6 |

Fit #intersect
Chart #Ok




0 Bottom
3.0 Top
-5.1 EC50
2.2 Hill slope

# Data Spreadsheets

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Experiment date: | 3Nov2011 | | | | blank = no cells, vehicle control | | | | | Spreadsheet locked on: 11/10/2011 | | | |
| TopCount Model B9912V, Serial# 408672 | | | | | neg. control = cells + vehicle. | | | | | Green shaded areas unlocked cells for data entry | | | |
| 11/11/11 15:26 | | | | | Study Number: | 9070-100107ARTA | | | | | | | |
| Assay Conducted by: | | | | | Compound | Nilutamide (Nil) | | | | | | | |

| Nilutamide Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 183950 | 2450 | 128200 | 173100 | 117150 | 75500 | 22600 | 11900 | 12500 | 13200 | 1850 | with 1nM DHT |
| B | 0 | 169350 | 4400 | 148200 | 159500 | 103450 | 92700 | 25650 | 18100 | 10750 | 11650 | 300 | with 1nM DHT |
| C | 0 | 184250 | 3250 | 189850 | 159600 | 131600 | 89450 | 32450 | 17000 | 15350 | 14400 | 2700 | with 1nM DHT |
| D | 0 | 222900 | 3150 | 155150 | 161250 | 130950 | 97150 | 33950 | 19900 | 11800 | 15800 | 2750 | with 1nM DHT |
| E | *0* | *197100* | *186950* | *201950* | *202250* | *198900* | *234600* | *196450* | *205300* | *226850* | *158900* | *12050* | with 1000nM DHT |
| F | *50* | *186700* | *217200* | *163350* | *203450* | *221950* | *250850* | *208400* | *220000* | *206050* | *133200* | *3300* | with 1000nM DHT |
| G | *0* | *238000* | *189100* | *148000* | *183750* | *219850* | *179050* | *229350* | *208750* | *229200* | *181000* | *14450* | with 1000nM DHT |
| H | *0* | *199300* | *172550* | *210750* | *212700* | *206300* | *203000* | *172100* | *225000* | *190800* | *86300* | *7400* | with 1000nM DHT |
| Mean | 13 | 190113 | 3313 | 155350 | 163363 | 120788 | 88700 | 28663 | 16725 | 12600 | 13763 | 1900 | Fold Induction (1nM DH |
| Std Dev | 25 | 22938 | 808 | 25681 | 6541 | 13342 | 9349 | 5420 | 3432 | 1969 | 1764 | 1144 | |
| SEM | 13 | 11469 | 404 | 12840 | 3271 | 6671 | 4674 | 2710 | 1716 | 985 | 882 | 572 | |
| CV% | *200.0* | *12.1* | *24.4* | *16.5* | *4.0* | *11.0* | *10.5* | *18.9* | *20.5* | *15.6* | *12.8* | *60.2* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.6 | 0.5 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | Fold Induction (1000nM |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 205275 | 191450 | 181563 | 201038 | 211750 | 216625 | 201575 | 229763 | 213900 | 140400 | 9525 | |
| Std Dev | 25 | 22498 | 18673 | 29723 | 11210 | 11022 | 32250 | 23896 | 27303 | 18180 | 36013 | 5140 | |
| SEM | 13 | 11249 | 9337 | 14862 | 5605 | 5511 | 16125 | 11948 | 13652 | 9090 | 18007 | 2570 | |
| CV% | *200.0* | *11.0* | *9.8* | *16.4* | *5.6* | *5.2* | *14.9* | *11.9* | *11.9* | *8.5* | *25.7* | *54.0* | |

Mean VC 3313 Mean DHT 1000nM Control 191450

**Subtraction of VC from wells**

| Nilutamide Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -3263 | 180638 | -863 | 124888 | 169788 | 113838 | 72188 | 19288 | 8588 | 9188 | 9888 | -1463 | with 1nM DHT |
| B | -3313 | 166038 | 1088 | 144888 | 156188 | 100138 | 89388 | 22338 | 14788 | 7438 | 8338 | -3013 | with 1nM DHT |
| C | -3313 | 180938 | -63 | 186538 | 156288 | 128288 | 86138 | 29138 | 13688 | 12038 | 11088 | -613 | with 1nM DHT |
| D | -3313 | 219588 | -163 | 151838 | 157938 | 127638 | 93838 | 30638 | 16588 | 8488 | 12488 | -563 | with 1nM DHT |
| E | -3313 | 193788 | 183638 | 198638 | 198938 | 196588 | 231288 | 193138 | 201968 | 223638 | 155588 | 9638 | with 1000nM DHT |
| F | -3263 | 183388 | 213888 | 162238 | 200138 | 218638 | 247538 | 205088 | 216688 | 204738 | 151888 | -13 | with 1000nM DHT |
| G | -3313 | 234688 | 185788 | 144688 | 182438 | 216538 | 175738 | 226038 | 265438 | 226588 | 157688 | 11138 | with 1000nM DHT |
| H | -3313 | 195988 | 169238 | 207438 | 209388 | 202988 | 198688 | 168788 | 221688 | 187488 | 83188 | 4088 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 183194

| Nilutamide Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -3300 | 186800 | 0 | 152038 | 160050 | 117475 | 85388 | 25350 | 13413 | 9288 | 10450 | -1413 |
| Std Dev | 25 | 22938 | 808 | 25681 | 6541 | 13342 | 9349 | 5420 | 3432 | 1969 | 1764 | 1144 |
| SEM | 13 | 11469 | 404 | 12840 | 3271 | 6671 | 4674 | 2710 | 1716 | 985 | 882 | 572 |
| CV% | *-0.8* | *12.3* | | *16.9* | *4.1* | *11.4* | *10.9* | *21.4* | *23.6* | *21.2* | *16.9* | *-81.0* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.6 | 0.5 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))**

| Nilutamide Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.1 | 118.8 | -0.6 | 82.1 | 111.7 | 74.9 | 47.5 | 12.7 | 5.6 | 6.0 | 6.5 | -1.0 | with 1nM DHT |
| B | -2.2 | 109.2 | 0.7 | 95.3 | 102.7 | 65.9 | 58.6 | 14.7 | 9.7 | 4.9 | 5.5 | -2.0 | with 1nM DHT |
| C | -2.2 | 119.0 | 0.0 | 122.7 | 102.8 | 84.4 | 56.7 | 19.2 | 9.0 | 7.9 | 7.3 | -0.4 | with 1nM DHT |
| D | -2.2 | 144.4 | -0.1 | 99.9 | 103.9 | 84.0 | 61.7 | 20.2 | 10.9 | 5.6 | 8.2 | -0.4 | with 1nM DHT |
| E | -1.8 | 105.8 | 100.2 | 108.4 | 108.6 | 106.8 | 126.3 | 105.4 | 110.3 | 122.0 | 84.9 | 5.3 | with 1000nM DHT |
| F | -1.8 | 100.1 | 116.8 | 88.6 | 109.2 | 119.3 | 135.1 | 112.0 | 118.3 | 111.8 | 82.9 | 0.0 | with 1000nM DHT |
| G | -1.8 | 128.1 | 101.4 | 79.0 | 99.6 | 118.2 | 95.9 | 123.4 | 144.9 | 123.7 | 86.1 | 6.1 | with 1000nM DHT |
| H | -1.8 | 107.0 | 92.4 | 113.2 | 114.3 | 110.8 | 108.5 | 92.1 | 121.0 | 102.3 | 46.4 | 2.2 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

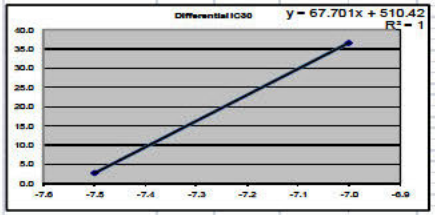
| Nilutamide Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.2 | 122.9 | 0.0 | 100.0 | 105.3 | 77.3 | 56.2 | 16.7 | 8.8 | 6.1 | 5.9 | |
| Std Dev | 0.0 | 15.1 | 0.5 | 16.9 | 4.3 | 8.8 | 6.1 | 3.6 | 2.3 | 1.3 | 1.2 | |
| SEM | 0.0 | 7.5 | 0.3 | 8.4 | 2.2 | 4.4 | 3.1 | 1.8 | 1.1 | 0.6 | 0.6 | |

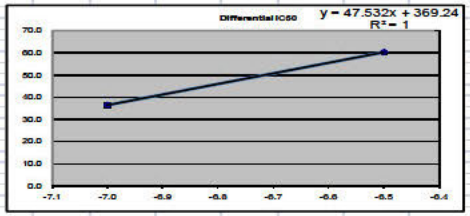
**High Agonist control, % of Maximal Induction Control (Average)**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.8 | 110.2 | 102.7 | 97.3 | 107.9 | 113.8 | 116.4 | 108.2 | 123.6 | 115.0 | 74.8 | |
| Std Dev | 0.0 | 12.3 | 10.2 | 16.2 | 6.1 | 6.0 | 17.6 | 13.0 | 14.9 | 9.9 | 19.7 | |
| SEM | 0.0 | 6.1 | 5.1 | 8.1 | 3.1 | 3.0 | 8.8 | 6.5 | 7.5 | 5.0 | 9.8 | |

| Nilutamide Antag | | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.4 | -12.6 | 102.7 | -2.7 | 2.7 | 36.5 | 60.3 | 91.6 | 114.8 | 108.8 | 68.0 | |

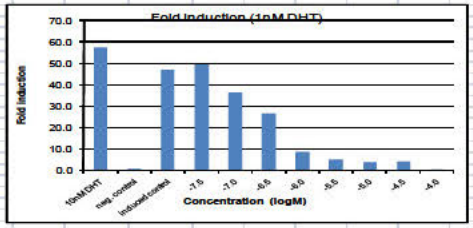
| | -7.5 | -7.0 | | | -7.0 | -6.5 | | Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Differential IC30 | 2.7 | 36.5 | Differential IC60 | | 36.5 | 60.3 | | 100.0 | 6.1 | 93.9 |
| | -7.1 | | | | -6.7 | | | | | |

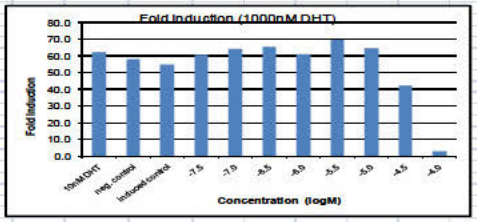



**FOLD INDUCTION**

| | 10nM DH | neg. control | Induced cor | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 55.5 | 0.7 | 38.7 | 52.3 | 35.4 | 22.8 | 6.8 | 3.6 | 3.8 | 4.0 | 0.6 |
| | 51.1 | 1.3 | 44.7 | 48.2 | 31.2 | 28.0 | 7.7 | 5.5 | 3.2 | 3.5 | 0.1 |
| | 55.6 | 1.0 | 57.3 | 48.2 | 39.7 | 27.0 | 9.8 | 5.1 | 4.6 | 4.3 | 0.8 |
| | 67.3 | 1.0 | 46.8 | 48.7 | 39.5 | 29.3 | 10.2 | 6.0 | 3.6 | 4.8 | 0.8 |
| | 59.5 | 56.4 | 61.0 | 61.1 | 60.0 | 70.8 | 59.3 | 62.0 | 68.5 | 48.0 | 3.9 |
| | 56.4 | 65.6 | 50.0 | 61.4 | 67.0 | 75.7 | 62.9 | 66.4 | 62.8 | 46.9 | 1.0 |
| | 71.8 | 57.1 | 44.7 | 56.1 | 66.4 | 54.1 | 69.2 | 81.1 | 69.4 | 48.6 | 4.0 |
| | 60.2 | 52.1 | 63.6 | 64.2 | 62.3 | 61.0 | 52.0 | 67.9 | 57.6 | 26.1 | 2.2 |
| Mean | 57.4 | 1.0 | 46.9 | 49.3 | 36.5 | 26.8 | 8.7 | 5.0 | 3.8 | 4.2 | 0.8 |
| Std Dev | 6.9 | 0.2 | 7.8 | 2.0 | 4.0 | 2.8 | 1.6 | 1.0 | 0.6 | 0.5 | 0.3 |
| SEM | 3.5 | 0.1 | 3.9 | 1.0 | 2.0 | 1.4 | 0.8 | 0.5 | 0.3 | 0.3 | 0.2 |
| CV% | *12.1* | *24.4* | *16.5* | *4.0* | *11.0* | *10.5* | *18.9* | *20.5* | *13.6* | *12.8* | *60.2* |
| Relative Trar | 100 | 1.7 | 81.7 | 85.9 | 63.5 | 46.7 | 15.1 | 8.8 | 6.6 | 7.2 | 1.0 |
| Mean | 62.0 | 57.8 | 54.8 | 60.7 | 63.9 | 65.4 | 60.9 | 69.4 | 64.6 | 42.4 | 2.9 |
| Std Dev | 6.8 | 5.6 | 9.0 | 3.4 | 3.3 | 9.7 | 7.2 | 8.2 | 5.5 | 10.9 | 1.6 |
| SEM | 3.4 | 2.8 | 4.5 | 1.7 | 1.7 | 4.9 | 3.6 | 4.1 | 2.7 | 5.4 | 0.8 |
| CV% | *11.0* | *9.6* | *16.4* | *3.6* | *3.2* | *14.9* | *11.9* | *11.9* | *8.5* | *25.7* | *54.0* |
| Relative Trar | 100 | 93.3 | 88.4 | 97.9 | 103.2 | 105.5 | 98.2 | 111.9 | 104.2 | 68.4 | 4.6 |

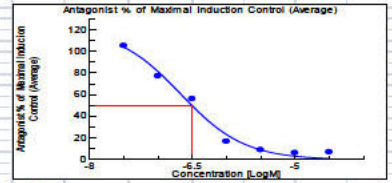



**Viability (% Control)**

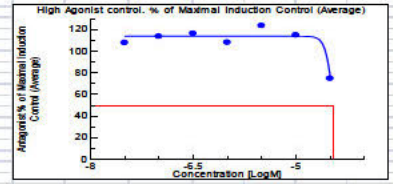
| Nilutamide Antag | 10nM DHT | neg. cont | Induced | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 92 | 100 | 101 | 98 | 101 | 101 | 92 | 88 | 97 | 95 | 96 |
| StdDev | 7 | 8 | 10 | 10 | 13 | 10 | 7 | 10 | 11 | 3 | 4 |
| SEM | 3 | 3 | 4 | 4 | 5 | 4 | 3 | 4 | 5 | 1 | 2 |
| %CV | 7.4 | 8.3 | 10.4 | 10.2 | 13.3 | 10.3 | 7.9 | 10.3 | 11.7 | 2.9 | 7.6 |

Fit -6.5
Chart #Ok




0 Bottom
121.7 Top
-6.7 EC50
-0.9 Hill slope

Fit >-4.5
Chart #Ok




0 Bottom
114.2 Top
-4.5 EC50
-7.7 Hill slope

# Data Spreadsheets

| | | | |
|---|---|---|---|
| Experiment date: | 13oct2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:26 | | Study Number: | 9070-100107 |
| Assay Conducted by: | [redacted] | Compound | ppDDE |

| ppDDE ag | blank | 10nMDHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1474400 | 31850 | 26800 | 68400 | 72100 | 74850 | 49700 | 47150 | 39150 | 52950 | 46750 | |
| B | 100 | 1541100 | 36200 | 28400 | 97800 | 77600 | 86500 | 50650 | 45950 | 38950 | 58650 | 44000 | |
| C | 0 | 1525350 | 36100 | 29400 | 93600 | 84300 | 89450 | 61550 | 55400 | 48600 | 71100 | 54500 | |
| D | 50 | 1546650 | 33500 | 34950 | 87550 | 88500 | 79600 | 65050 | 56550 | 51200 | 54650 | 56600 | |
| E | 0 | 1697650 | 30650 | 36600 | 97850 | 82900 | 95500 | 65400 | 51150 | 45900 | 60700 | 53300 | |
| F | 100 | 1512000 | 34200 | 38650 | 102500 | 81700 | 90400 | 60300 | 55450 | 47150 | 70250 | 52900 | |
| G | *0* | *456400* | *83750* | *30200* | *106250* | *80450* | *70800* | *126900* | *102600* | *70950* | *86150* | *40350* | with 10µM Nilutamide |
| H | *0* | *334650* | *28200* | *25750* | *33950* | *31800* | *33050* | *31450* | *40750* | *48300* | *61850* | *51450* | with 10µM Nilutamide |
| Mean | 50 | 1549525 | 33108 | | 91283 | 81183 | 86050 | 58775 | 51942 | 45158 | 61383 | 51342 | |
| Std Dev | 45 | 77015 | 3686 | | 12283 | 5689 | 7577 | 6952 | 4582 | 5050 | 7713 | 4876 | |
| SEM | 18 | 31441 | 1064 | | 5014 | 2322 | 3093 | 2838 | 1871 | 2062 | 3149 | 1991 | |
| CV% | *89.4* | *5.0* | *11.13* | | *13.5* | *7.0* | *8.8* | *11.8* | *8.8* | *11.2* | *12.6* | *9.5* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 395525 | 41975 | | 70100 | 56125 | 51925 | 79175 | 74675 | 59625 | 74000 | 45900 | |
| Std Dev | 0 | 86090 | 27909 | | 51124 | 34401 | 26693 | 67493 | 39492 | 16016 | 17183 | 7645 | |

Mean VC 33108 Mean Nilutamide Control 41975

**Subtraction of VC from wells**

| ppDDE ag | blank | 10nMDHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 50 | 1441292 | -1258 | -6308 | 35292 | 38992 | 41742 | 16592 | 14042 | 6042 | 19842 | 13642 | |
| B | 100 | 1507992 | 3092 | -4708 | 64692 | 44492 | 53392 | 17542 | 12842 | 5842 | 25542 | 10892 | |
| C | 0 | 1492242 | 2992 | -3708 | 60492 | 51192 | 56342 | 28442 | 22292 | 15492 | 37992 | 21392 | |
| D | 50 | 1513542 | 392 | 1842 | 54442 | 55392 | 46492 | 31942 | 23442 | 18092 | 21542 | 23492 | |
| E | 0 | 1664542 | -2458 | 3492 | 64742 | 49792 | 62392 | 32292 | 18042 | 12792 | 27592 | 20192 | |
| F | 100 | 1478892 | 1092 | 5542 | 69392 | 48592 | 57292 | 27192 | 22342 | 14042 | 37142 | 19792 | |
| G | 0 | 414425 | 41775 | -11775 | 64275 | 38475 | 28825 | 84925 | 60625 | 28975 | 44175 | -1625 | with 10µM Nilutamide |
| H | 0 | 292675 | -13775 | -16225 | -8025 | -10175 | -8925 | -10525 | 4775 | 6325 | 19875 | 9475 | with 10µM Nilutamide |

**Corrected Data Means**

| ppDDE ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 50 | 1516417 | 0 | | 58175 | 48075 | 52942 | 25667 | 18833 | 12050 | 28275 | 18233 |
| Std Dev | 45 | 77015 | 3686 | | 12283 | 5689 | 7577 | 6952 | 4582 | 5050 | 7713 | 4876 |
| SEM | 18 | 31441 | 1064 | | 5014 | 2322 | 3093 | 2838 | 1871 | 2062 | 3149 | 1991 |
| CV% | *89.4* | *5.1* | | | *21.1* | *11.8* | *14.3* | *27.1* | *24.3* | *41.0* | *27.3* | *26.7* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

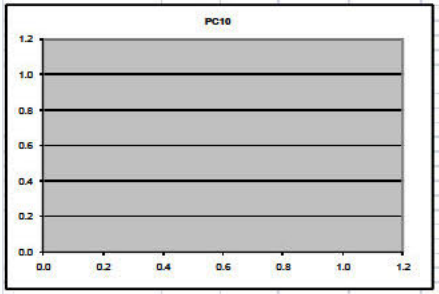
**Agonist: % of Maximal Induction Control**

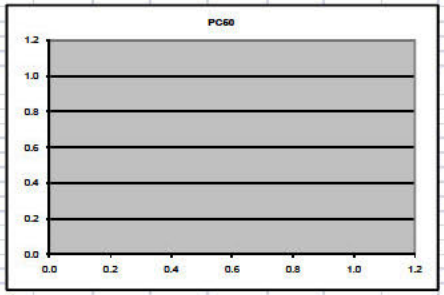
| ppDDE ag | blank | 10nMDHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 95.0 | -0.1 | -0.4 | 2.3 | 2.6 | 2.8 | 1.1 | 0.9 | 0.4 | 1.3 | 0.9 | |
| B | 0.0 | 99.4 | 0.2 | -0.3 | 4.3 | 2.9 | 3.5 | 1.2 | 0.8 | 0.4 | 1.7 | 0.7 | |
| C | 0.0 | 98.4 | 0.2 | -0.2 | 4.0 | 3.4 | 3.7 | 1.9 | 1.5 | 1.0 | 2.5 | 1.4 | |
| D | 0.0 | 99.8 | 0.0 | 0.1 | 3.6 | 3.7 | 3.1 | 2.1 | 1.5 | 1.2 | 1.4 | 1.5 | |
| E | 0.0 | 109.8 | -0.2 | 0.2 | 4.3 | 3.3 | 4.1 | 2.1 | 1.2 | 0.8 | 1.8 | 1.3 | |
| F | 0.0 | 97.5 | 0.1 | 0.4 | 4.6 | 3.2 | 3.8 | 1.8 | 1.5 | 0.9 | 2.4 | 1.3 | |
| G | 0.0 | 27.3 | 2.8 | -0.8 | 4.2 | 2.5 | 1.9 | 5.6 | 4.0 | 1.9 | 2.9 | -0.1 | with 10µM Nilutamide |
| H | 0.0 | 19.3 | -0.9 | -1.1 | -0.5 | -0.7 | -0.6 | -0.7 | 0.3 | 0.4 | 1.3 | 0.6 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| ppDDE ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 3.8 | 3.2 | 3.5 | 1.7 | 1.2 | 0.8 | 1.9 | |
| Std Dev | 0.0 | 5.1 | 0.2 | | 0.8 | 0.4 | 0.5 | 0.5 | 0.3 | 0.3 | 0.5 | |
| SEM | 0.0 | 2.1 | 0.1 | | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | |

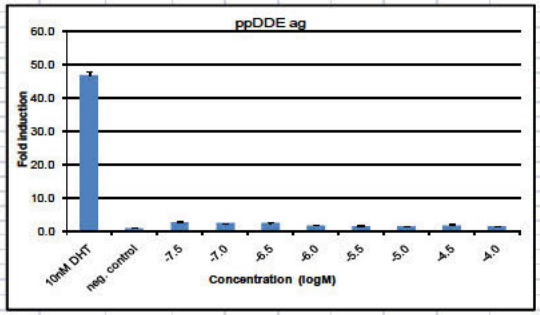
PC10 PC50

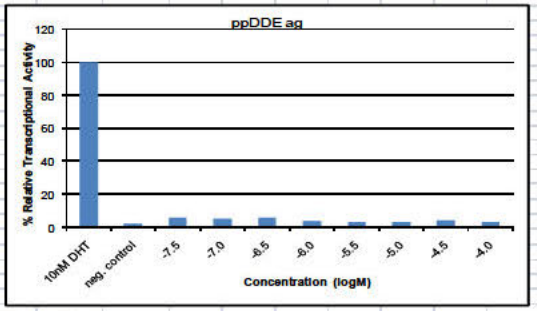



**FOLD INDUCTION**

| | 10nM DH | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 44.5 | 1.0 | 0.8 | 2.1 | 2.2 | 2.3 | 1.5 | 1.4 | 1.2 | 1.6 | 1.4 |
| | 46.5 | 1.1 | 0.9 | 3.0 | 2.3 | 2.6 | 1.5 | 1.4 | 1.2 | 1.8 | 1.3 |
| | 46.1 | 1.1 | 0.9 | 2.8 | 2.5 | 2.7 | 1.9 | 1.7 | 1.5 | 2.1 | 1.6 |
| | 46.7 | 1.0 | 1.1 | 2.6 | 2.7 | 2.4 | 2.0 | 1.7 | 1.5 | 1.7 | 1.7 |
| | 51.3 | 0.9 | 1.1 | 3.0 | 2.5 | 2.9 | 2.0 | 1.5 | 1.4 | 1.8 | 1.6 |
| | 45.7 | 1.0 | 1.2 | 3.1 | 2.5 | 2.7 | 1.8 | 1.7 | 1.4 | 2.1 | 1.6 |
| Mean | 46.8 | 1.0 | | 2.8 | 2.5 | 2.6 | 1.8 | 1.6 | 1.4 | 1.9 | 1.6 |
| Std Dev | 2.3 | 0.1 | | 0.4 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 |
| SEM | 0.9 | 0.0 | | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| CV% | *5.0* | *11.1* | | *13.5* | *7.0* | *8.8* | *11.8* | *8.8* | *11.2* | *12.6* | *9.5* |
| Relative Trar | 100 | 2.1 | | 5.9 | 5.2 | 5.6 | 3.8 | 3.4 | 2.9 | 4.0 | 3.3 |

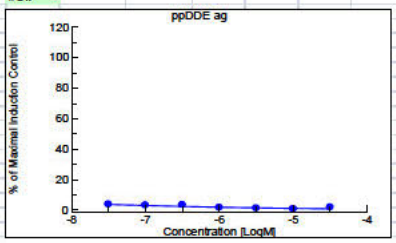



**Viability (% Control)**

| ppDDE ag | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 110 | 100 | 105 | 106 | 107 | 105 | 101 | 98 | 97 | 95 | 68 |
| StdDev | 6 | 1 | 6 | 5 | 6 | 5 | 7 | 3 | 4 | 2 | 4 |
| SEM | 2 | 1 | 3 | 2 | 2 | 2 | 3 | 1 | 2 | 1 | 2 |
| %CV | 5.3 | 1.3 | 6.1 | 4.9 | 5.2 | 4.5 | 6.6 | 2.8 | 4.5 | 2.5 | 5.9 |

Fit #Interse
Chart ct
#Ok




0 Bottom
12.8 Top
-9.0 EC50
-0.2 Hill slope

# Data Spreadsheets

Experiment date: 13Oct2011
TopCount Model B9912V. Serial# 408672
11/11/11 15:26
Assay Conducted by: [redacted]

blank = no cells. vehicle control
neg. control = cells + vehicle.
Study Number: 9070-100107ARTA
Compound ppDDE

Spreadsheet locked on: 11/10/2011
Green shaded areas unlocked cells for data entry

| ppDDE ant | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 100 | 1301550 | 21650 | 906550 | 1029600 | 1019400 | 1284350 | 1070850 | 937200 | 639650 | 225800 | 126400 | with 1nM DHT |
| B | 100 | 974850 | 24750 | 954300 | 1169800 | 1034750 | 1338550 | 1033250 | 920950 | 665350 | 264800 | 117500 | with 1nM DHT |
| C | 100 | 1019600 | 24200 | 961950 | 984950 | 1022800 | 1223150 | 1057150 | 992300 | 554050 | 237900 | 112600 | with 1nM DHT |
| D | 0 | 1122500 | 22900 | 921200 | 996300 | 1066150 | 1106450 | 887350 | 946400 | 523650 | 284600 | 113150 | with 1nM DHT |
| E | 100 | 1019800 | 1066500 | 1228350 | 1090950 | 1117100 | 1206750 | 1158700 | 1301900 | 1046150 | 1079900 | 1099350 | with 1000nM DHT |
| F | 0 | 1195750 | 1040300 | 972700 | 1214200 | 1040700 | 1233900 | 1068850 | 1157350 | 1239050 | 1164950 | 1111100 | with 1000nM DHT |
| G | 50 | 1184200 | 1104400 | 930650 | 1233500 | 1174550 | 1432150 | 1004250 | 1319050 | 1325550 | 1368100 | 1086750 | with 1000nM DHT |
| H | 0 | 1039700 | 1146300 | 1145400 | 1249200 | 1126700 | 1203200 | 1118700 | 1258300 | 1078400 | 1186050 | 1176450 | with 1000nM DHT |
| Mean | 75 | 1104625 | 23375 | 933500 | 1045163 | 1035775 | 1238125 | 1012150 | 949213 | 595675 | 253275 | 117413 | |
| Std Dev | 50 | 145109 | 1387 | 23457 | 85225 | 21293 | 99640 | 84638 | 30591 | 67598 | 26491 | 6380 | |
| SEM | 25 | 72554 | 694 | 11728 | 42612 | 10647 | 49820 | 42319 | 15296 | 33799 | 13246 | 3190 | |
| CV% | 66.7 | 13.1 | 5.9 | 2.5 | 8.2 | 2.1 | 8.0 | 8.4 | 3.2 | 11.3 | 10.5 | 5.4 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.9 | 1.1 | 0.9 | 0.9 | 0.5 | 0.2 | 0.1 | |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 38 | 1107363 | 1089875 | 1069525 | 1201963 | 1114763 | 1269500 | 1087625 | 1259175 | 1176863 | 1200250 | 1118413 | |
| Std Dev | 48 | 95595 | 45860 | 141181 | 76072 | 55401 | 109253 | 66636 | 72432 | 136785 | 121178 | 39949 | |
| SEM | 24 | 47797 | 22930 | 70591 | 38036 | 27700 | 54626 | 33318 | 36216 | 68393 | 60589 | 19974 | |
| CV% | 127.7 | 8.6 | 4.2 | 13.2 | 6.3 | 5.0 | 8.6 | 6.1 | 5.8 | 11.6 | 10.1 | 3.6 | |

Mean VC 23375 Mean DHT 1000nM Control 1089875

**Subtraction of VC from wells**

| ppDDE ant | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -23275 | 1278175 | -1725 | 883175 | 1006225 | 996025 | 1260975 | 1047475 | 913825 | 616275 | 202425 | 103025 | with 1nM DHT |
| B | -23275 | 951475 | 1375 | 930925 | 1146425 | 1011375 | 1315175 | 1009875 | 897575 | 641975 | 241425 | 94125 | with 1nM DHT |
| C | -23275 | 996225 | 825 | 928575 | 961575 | 999425 | 1199775 | 1033775 | 968925 | 530675 | 214525 | 89225 | with 1nM DHT |
| D | -23375 | 1099125 | -475 | 897825 | 972925 | 1042775 | 1083075 | 863975 | 923025 | 500275 | 261225 | 89775 | with 1nM DHT |
| E | -23275 | 996425 | 1045125 | 1204975 | 1067575 | 1093725 | 1185375 | 1136325 | 1278525 | 1022775 | 1056525 | 1075975 | with 1000nM DHT |
| F | -23375 | 1172375 | 1016925 | 949325 | 1190825 | 1017325 | 1210525 | 1045475 | 1134175 | 1235675 | 1141575 | 1087725 | with 1000nM DHT |
| G | -23325 | 1160825 | 1081025 | 907275 | 1230125 | 1151175 | 1408775 | 980875 | 1295675 | 1302475 | 1344725 | 1063375 | with 1000nM DHT |
| H | -23375 | 1006325 | 1122925 | 1123025 | 1225825 | 1103325 | 1179825 | 1095325 | 1234825 | 1053025 | 1164675 | 1153075 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 1056325

| ppDDE ant | blank | 10nM DHT | neg. control | induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -23300 | 1081250 | 0 | 910125 | 1021788 | 1012400 | 1214750 | 988775 | 926838 | 572300 | 229900 | 94038 |
| Std Dev | 50 | 145109 | 1387 | 23457 | 85225 | 21293 | 99640 | 84638 | 30591 | 67598 | 26491 | 6380 |
| SEM | 25 | 72554 | 694 | 11728 | 42612 | 10647 | 49820 | 42319 | 15296 | 33799 | 13246 | 3190 |
| CV% | -0.2 | 13.4 | | 2.6 | 8.3 | 2.1 | 8.2 | 8.6 | 3.3 | 11.8 | 11.5 | 6.8 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.9 | 1.1 | 0.9 | 0.9 | 0.5 | 0.2 | 0.1 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| ppDDE ant | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.6 | 140.4 | -0.2 | 97.0 | 110.6 | 109.4 | 138.5 | 115.1 | 100.4 | 67.7 | 22.2 | 11.3 | with 1nM DHT |
| B | -2.6 | 104.5 | 0.2 | 102.3 | 126.0 | 111.1 | 144.5 | 111.0 | 98.6 | 70.5 | 26.5 | 10.3 | with 1nM DHT |
| C | -2.6 | 109.5 | 0.1 | 102.0 | 105.7 | 109.8 | 131.8 | 113.6 | 106.5 | 58.3 | 23.6 | 9.8 | with 1nM DHT |
| D | -2.6 | 120.8 | -0.1 | 98.6 | 106.9 | 114.6 | 119.0 | 94.9 | 101.4 | 55.0 | 28.7 | 9.9 | with 1nM DHT |
| E | -2.2 | 94.3 | 98.9 | 114.1 | 101.1 | 103.5 | 112.2 | 107.5 | 121.0 | 96.8 | 100.0 | 101.9 | with 1000nM DHT |
| F | -2.2 | 111.0 | 96.3 | 89.9 | 112.7 | 96.3 | 114.6 | 99.0 | 107.4 | 117.0 | 108.1 | 103.0 | with 1000nM DHT |
| G | -2.2 | 109.9 | 102.3 | 85.9 | 116.5 | 109.0 | 133.4 | 92.9 | 122.7 | 123.3 | 127.3 | 100.7 | with 1000nM DHT |
| H | -2.2 | 95.3 | 106.3 | 106.3 | 116.0 | 104.4 | 111.7 | 103.7 | 116.9 | 99.7 | 110.3 | 109.2 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

| ppDDE ant | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.6 | 118.8 | 0.0 | 100.0 | 112.3 | 111.2 | 133.5 | 108.6 | 101.7 | 62.9 | 25.3 | |
| Std Dev | 0.0 | 15.9 | 0.2 | 2.6 | 9.4 | 2.3 | 10.9 | 9.3 | 3.4 | 7.4 | 2.9 | |
| SEM | 0.0 | 8.0 | 0.1 | 1.3 | 4.7 | 1.2 | 5.5 | 4.6 | 1.7 | 3.7 | 1.5 | |

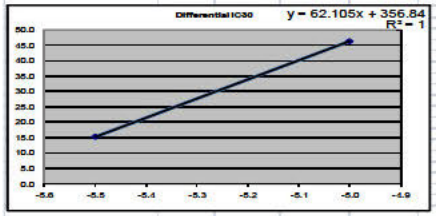
**High Agonist control, % of Maximal Induction Control (Average)**

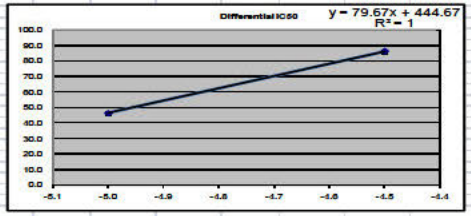
| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.2 | 102.6 | 101.0 | 99.0 | 111.6 | 103.3 | 118.0 | 100.8 | 117.0 | 109.2 | 111.4 | |
| Std Dev | 0.0 | 9.0 | 4.3 | 13.4 | 7.2 | 5.2 | 10.3 | 6.3 | 6.9 | 12.9 | 11.5 | |
| SEM | 0.0 | 4.5 | 2.2 | 6.7 | 3.6 | 2.6 | 5.2 | 3.2 | 3.4 | 6.5 | 5.7 | |

| ppDDE ant | | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.4 | -16.2 | 101.0 | -1.0 | -0.7 | -7.9 | -15.5 | -7.9 | 15.3 | 46.3 | 86.2 | |

| | -5.5 | -5.0 | | -5.0 | -4.5 |
|---|---|---|---|---|---|
| Differential IC50 | 15.3 | 46.3 | Differential IC50 | 46.3 | 86.2 |
| | -5.3 | | | -5.0 | |

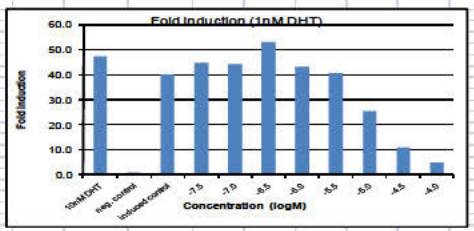
Relative Inhibitory Concentration Max (RICMax)
100.0 25.3 74.7

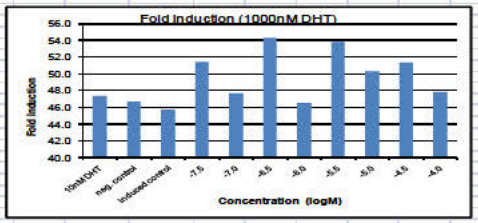



**FOLD INDUCTION**

| | 10nM DH | neg. control | induced con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 55.7 | 0.9 | 38.8 | 44.0 | 43.6 | 54.9 | 45.8 | 40.1 | 27.4 | 9.7 | 5.4 | with 1nM DHT |
| | 41.7 | 1.1 | 40.8 | 50.0 | 44.3 | 57.3 | 44.2 | 39.4 | 28.5 | 11.3 | 5.0 | with 1nM DHT |
| | 43.6 | 1.0 | 40.7 | 42.1 | 43.8 | 52.3 | 45.2 | 42.5 | 23.7 | 10.2 | 4.8 | with 1nM DHT |
| | 48.0 | 1.0 | 39.4 | 42.6 | 45.6 | 47.3 | 38.0 | 40.5 | 22.4 | 12.2 | 4.8 | with 1nM DHT |
| | 43.6 | 45.7 | 52.5 | 46.7 | 47.8 | 51.7 | 49.6 | 55.7 | 44.8 | 46.2 | 47.0 | with 1000nM DHT |
| | 51.2 | 44.5 | 41.6 | 51.9 | 44.5 | 52.8 | 45.7 | 49.5 | 53.9 | 49.8 | 47.5 | with 1000nM DHT |
| | 50.7 | 47.2 | 39.8 | 53.6 | 50.2 | 51.3 | 43.0 | 56.4 | 56.7 | 58.5 | 46.5 | with 1000nM DHT |
| | 44.1 | 49.0 | 49.0 | 53.4 | 48.2 | 51.5 | 47.9 | 53.8 | 46.0 | 50.8 | 50.3 | with 1000nM DHT |
| Fold Induction (1nM DH | Mean | 47.3 | 1.0 | 39.9 | 44.7 | 44.3 | 53.0 | 43.3 | 40.6 | 25.6 | 10.8 | 5.0 | |
| | Std Dev | 6.2 | 0.1 | 1.0 | 3.6 | 0.9 | 4.3 | 3.6 | 1.3 | 2.9 | 1.1 | 0.3 | |
| | SEM | 3.1 | 0.0 | 0.5 | 1.8 | 0.5 | 2.1 | 1.8 | 0.7 | 1.4 | 0.6 | 0.1 | |
| | CV% | 13.1 | 5.9 | 2.5 | 8.2 | 2.1 | 8.0 | 8.4 | 3.2 | 11.3 | 10.5 | 5.4 | |
| | Relative Trar | 100 | 2.1 | 84.5 | 94.6 | 93.8 | 112.1 | 91.6 | 85.9 | 53.9 | 22.9 | 10.6 | |
| Fold Induction (1000nM | Mean | 47.4 | 46.6 | 45.8 | 51.4 | 47.7 | 54.3 | 46.5 | 53.9 | 50.3 | 51.3 | 47.8 | |
| | Std Dev | 4.1 | 2.0 | 6.0 | 3.3 | 2.4 | 4.7 | 2.9 | 3.1 | 5.9 | 5.2 | 1.7 | |
| | SEM | 2.0 | 1.0 | 3.0 | 1.6 | 1.2 | 2.3 | 1.4 | 1.5 | 2.9 | 2.6 | 0.9 | |
| | CV% | 8.6 | 4.2 | 13.2 | 8.3 | 5.0 | 8.6 | 6.1 | 5.8 | 11.6 | 10.1 | 3.6 | |
| | Relative Trar | 100 | 98.4 | 96.6 | 108.5 | 100.7 | 114.6 | 98.2 | 113.7 | 106.3 | 108.4 | 101.0 | |

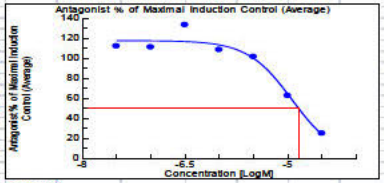



**Viability (% Control)**

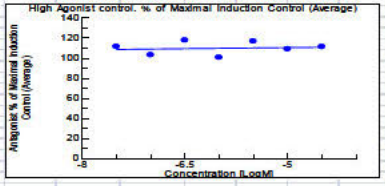
| ppDDE ant | 10nM DHT | neg. cont | induced c | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 110 | 100 | 105 | 106 | 107 | 105 | 101 | 98 | 97 | 95 | 68 |
| StdDev | 6 | 1 | 5 | 5 | 6 | 5 | 7 | 3 | 4 | 2 | 4 |
| SEM | 2 | 1 | 3 | 2 | 2 | 2 | 3 | 1 | 2 | 1 | 2 |
| %CV | 5.3 | 1.3 | 6.1 | 4.9 | 5.2 | 4.5 | 6.6 | 2.8 | 4.5 | 2.5 | 5.9 |

Fit -4.8
Chart #Ok




0 Bottom
118.0 Top
-4.9 EC50
-1.3 Hill slope

Fit <-7.5
Chart #Ok




0 Bottom
118.8 Top
-34.0 EC50
0.0 Hill slope

# Data Spreadsheets

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Experiment date: | 20Oct2011 | | | blank = no cells, vehicle control | | Spreadsheet locked on: | 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | | | neg. control = cells + vehicle. | | Green shaded areas unlocked cells for data entry | |
| 11/11/11 15:26 | | | | Study Number: | 9070-100107ARTA | | |
| Assay Conducted by: | [redacted] | | | Compound | ppDDE | | |

| ppDDE | blank | 10nMDHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 578050 | 9250 | 8900 | 8900 | 7450 | 9100 | 7350 | 10050 | 12100 | 16000 | 17550 | |
| B | 0 | 531550 | 8800 | 8950 | 6500 | 6100 | 9150 | 6250 | 10300 | 10550 | 18200 | 27300 | |
| C | 0 | 507900 | 11650 | 6350 | 8650 | 8050 | 11750 | 9000 | 11650 | 15800 | 16550 | 27300 | |
| D | 0 | 609950 | 7200 | 8800 | 8100 | 9700 | 9500 | 8900 | 11250 | 10500 | 17550 | 29400 | |
| E | 0 | 477450 | 9950 | 8450 | 8650 | 9350 | 10050 | 9000 | 13350 | 13650 | 17300 | 23200 | |
| F | 0 | 488650 | 11650 | 9300 | 11800 | 8250 | 10600 | 8600 | 10200 | 15650 | 16350 | 22400 | |
| G | *0* | *202550* | *101850* | *152200* | *127100* | *14000* | *100750* | *14700* | *88100* | *132800* | *98350* | *22450* | with 10µM Nilutamide |
| H | *100* | *206250* | *19900* | *20050* | *25600* | *14850* | *16850* | *20050* | *32600* | *30100* | *25700* | *21700* | with 10µM Nilutamide |
| Mean | 0 | 532258 | 9104 | | 8800 | 8150 | 10025 | 8183 | 11133 | 13042 | 16992 | 24525 | |
| Std Dev | 0 | 52216 | 1526 | | 1721 | 1308 | 1020 | 1136 | 1260 | 2381 | 832 | 4338 | |
| SEM | 0 | 21317 | 441 | | 703 | 534 | 416 | 464 | 514 | 972 | 339 | 1771 | |
| CV% | | *9.8* | *16.77* | | *19.6* | *16.0* | *10.2* | *13.9* | *11.3* | *18.3* | *4.9* | *17.7* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 50 | 204400 | 73500 | | 76350 | 14425 | 58800 | 17375 | 60350 | 81450 | 62025 | 22075 | |
| Std Dev | 71 | 2616 | 65134 | | 71771 | 601 | 59326 | 3783 | 39244 | 72620 | 51371 | 530 | |

Mean VC 9104 Mean Nilutamide Control 73500

**Subtraction of VC from wells**

| ppDDE | blank | 10nMDHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 568946 | 146 | -204 | -204 | -1654 | -4 | -1754 | 946 | 2996 | 6896 | 8446 | |
| B | 0 | 522446 | -304 | -154 | -2604 | -3004 | 46 | -2854 | 1196 | 1446 | 9096 | 18196 | |
| C | 0 | 498796 | 2546 | -2754 | -454 | -1054 | 2646 | -104 | 2546 | 6696 | 7446 | 18196 | |
| D | 0 | 600846 | -1904 | -304 | -1004 | 596 | 396 | -204 | 2146 | 1396 | 8446 | 20296 | |
| E | 0 | 468346 | 846 | -654 | -254 | 246 | 946 | -104 | 4246 | 4546 | 8196 | 14096 | |
| F | 0 | 479546 | 2546 | 196 | 2696 | -854 | 1496 | -504 | 1096 | 6546 | 7246 | 13296 | |
| G | 0 | 129050 | 28350 | 78700 | 53600 | -59500 | 27250 | -58800 | 14600 | 59300 | 24850 | -51050 | with 10µM Nilutamide |
| H | 100 | 132750 | -53600 | -53450 | -47900 | -58650 | -56650 | -53450 | -40900 | -43400 | -47800 | -51800 | with 10µM Nilutamide |

**Corrected Data Means**

| ppDDE | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0 | 523154 | 0 | | -304 | -954 | 921 | -921 | 2029 | 3938 | 7888 | 15421 |
| Std Dev | 0 | 52216 | 1526 | | 1721 | 1308 | 1020 | 1136 | 1260 | 2381 | 832 | 4338 |
| SEM | 0 | 21317 | 441 | | 703 | 534 | 416 | 464 | 514 | 972 | 339 | 1771 |
| CV% | | *10.0* | | | *-565.9* | *-137.1* | *110.8* | *-123.4* | *62.1* | *60.5* | *10.5* | *28.1* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

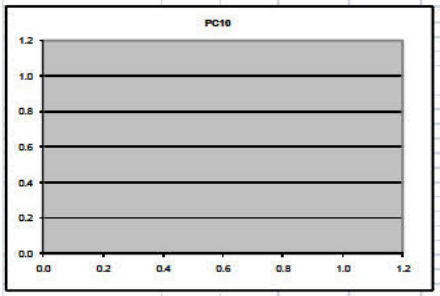
**Agonist: % of Maximal Induction Control**

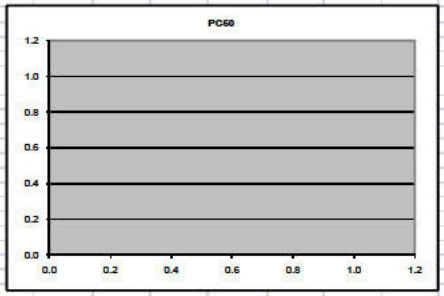
| ppDDE | blank | 10nMDHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 108.8 | 0.0 | 0.0 | 0.0 | -0.3 | 0.0 | -0.3 | 0.2 | 0.6 | 1.3 | 1.6 | |
| B | 0.0 | 99.9 | -0.1 | 0.0 | -0.5 | -0.6 | 0.0 | -0.5 | 0.2 | 0.3 | 1.7 | 3.5 | |
| C | 0.0 | 95.3 | 0.5 | -0.5 | -0.1 | -0.2 | 0.5 | 0.0 | 0.5 | 1.3 | 1.4 | 3.5 | |
| D | 0.0 | 114.9 | -0.4 | -0.1 | -0.2 | 0.1 | 0.1 | 0.0 | 0.4 | 0.3 | 1.6 | 3.9 | |
| E | 0.0 | 89.5 | 0.2 | -0.1 | 0.0 | 0.0 | 0.2 | 0.0 | 0.8 | 0.9 | 1.6 | 2.7 | |
| F | 0.0 | 91.7 | 0.5 | 0.0 | 0.5 | -0.2 | 0.3 | -0.1 | 0.2 | 1.3 | 1.4 | 2.5 | |
| G | 0.0 | 24.7 | 5.4 | 15.0 | 10.2 | -11.4 | 5.2 | -11.2 | 2.8 | 11.3 | 4.8 | -9.8 | with 10µM Nilutamide |
| H | 0.0 | 25.4 | -10.2 | -10.2 | -9.2 | -11.2 | -10.8 | -10.2 | -7.8 | -8.3 | -9.1 | -9.9 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| ppDDE | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | -0.1 | -0.2 | 0.2 | -0.2 | 0.4 | 0.8 | 1.5 | |
| Std Dev | 0.0 | 10.0 | 0.3 | | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.5 | 0.2 | |
| SEM | 0.0 | 4.1 | 0.1 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | |

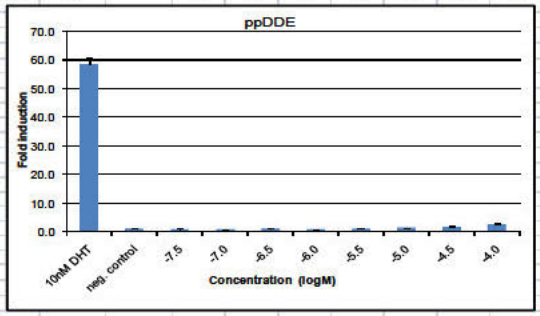
PC10 PC50

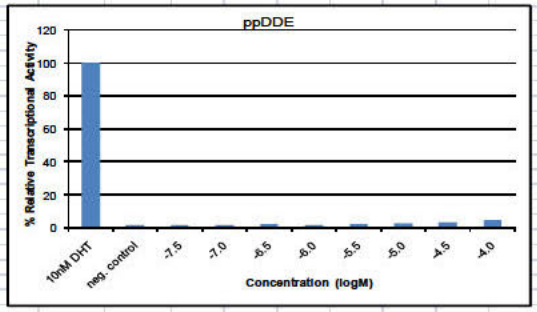



**FOLD INDUCTION**

| | 10nM DH | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 63.5 | 1.0 | 1.0 | 1.0 | 0.8 | 1.0 | 0.8 | 1.1 | 1.3 | 1.8 | 1.9 |
| | 58.4 | 1.0 | 1.0 | 0.7 | 0.7 | 1.0 | 0.7 | 1.1 | 1.2 | 2.0 | 3.0 |
| | 55.8 | 1.3 | 0.7 | 1.0 | 0.9 | 1.3 | 1.0 | 1.3 | 1.7 | 1.8 | 3.0 |
| | 67.0 | 0.8 | 1.0 | 0.9 | 1.1 | 1.0 | 1.0 | 1.2 | 1.2 | 1.9 | 3.2 |
| | 52.4 | 1.1 | 0.9 | 1.0 | 1.0 | 1.1 | 1.0 | 1.5 | 1.5 | 1.9 | 2.5 |
| | 53.7 | 1.3 | 1.0 | 1.3 | 0.9 | 1.2 | 0.9 | 1.1 | 1.7 | 1.8 | 2.5 |
| Mean | 58.5 | 1.0 | | 1.0 | 0.9 | 1.1 | 0.9 | 1.2 | 1.4 | 1.9 | 2.7 |
| Std Dev | 5.7 | 0.2 | | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | 0.5 |
| SEM | 2.3 | 0.0 | | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.2 |
| CV% | *0.8* | *16.8* | | *10.6* | *16.0* | *10.2* | *13.9* | *11.3* | *18.3* | *4.9* | *17.7* |
| Relative Tran | 100 | 1.7 | | 1.7 | 1.5 | 1.9 | 1.5 | 2.1 | 2.5 | 3.2 | 4.6 |

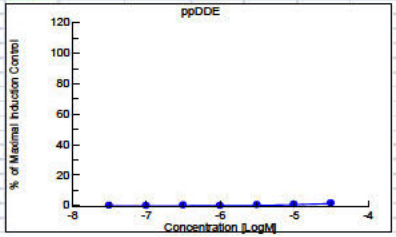



**Viability (% Control)**

| ppDDE | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 94 | 100 | 101 | 101 | 101 | 101 | 102 | 93 | 92 | 96 | 66 |
| StdDev | 3 | 7 | 8 | 8 | 8 | 13 | 11 | 8 | 8 | 6 | 3 |
| SEM | 1 | 3 | 3 | 3 | 3 | 5 | 4 | 3 | 3 | 2 | 1 |
| %CV | 3.5 | 7.1 | 7.6 | 8.3 | 8.2 | 12.9 | 10.6 | 8.9 | 8.7 | 5.8 | 4.2 |

Fit #Interse
Chart #Ok




0 Bottom
2.0 Top
-4.8 EC50
1.3 Hill slope

# Data Spreadsheets

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Experiment date: | 20Oct2011 | | | | blank = no cells, vehicle control | | | | Spreadsheet locked on: | 11/10/2011 | | | |
| TopCount Model B9912V. Serial# 408672 | | | | | neg. control = cells + vehicle. | | | | Green shaded areas unlocked cells for data entry | | | | |
| 11/11/11 15:26 | | | | | Study Number: | 9070-100107ARTA | | | | | | | |
| Assay Conducted by: | | | | | Compound | ppDDE | | | | | | | |

| ppDDE | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 529050 | 9300 | 488700 | 417850 | 417250 | 415350 | 446000 | 411000 | 243000 | 128050 | 67050 | with 1nM DHT |
| B | 300 | 474500 | 7850 | 443050 | 404300 | 396850 | 472100 | 411450 | 420150 | 295900 | 108700 | 69450 | with 1nM DHT |
| C | 150 | 486250 | 7650 | 441800 | 384200 | 362150 | 411950 | 425150 | 379850 | 243150 | 115650 | 59750 | with 1nM DHT |
| D | 50 | 421950 | 7050 | 303900 | 313800 | 301350 | 399350 | 318250 | 374100 | 215600 | 129500 | 52100 | with 1nM DHT |
| E | *50* | *376650* | *380150* | *373500* | *372850* | *313050* | *392250* | *431450* | *323700* | *442450* | *432850* | *363100* | with 1000nM DHT |
| F | *0* | *473450* | *321750* | *349450* | *382600* | *323300* | *349250* | *358700* | *393950* | *413450* | *464450* | *321450* | with 1000nM DHT |
| G | *0* | *554350* | *364400* | *358250* | *358050* | *346800* | *431750* | *362350* | *459300* | *447300* | *539250* | *507100* | with 1000nM DHT |
| H | *0* | *514100* | *413450* | *414600* | *394950* | *382650* | *374700* | *382000* | *469550* | *466600* | *501300* | *524700* | with 1000nM DHT |
| | | | | | | | | | | | | | Fold Induction (1nM DHT) |
| Mean | 125 | 477938 | 7938 | 419363 | 380038 | 366900 | 424688 | 400213 | 396275 | 249413 | 120475 | 62088 | |
| Std Dev | 132 | 44076 | 966 | 80008 | 46272 | 51467 | 32349 | 56458 | 22718 | 33589 | 10013 | 7833 | |
| SEM | 66 | 22038 | 483 | 40004 | 23136 | 25733 | 16174 | 28229 | 11359 | 16795 | 5006 | 3916 | |
| CV% | *105.8* | *9.2* | *12.2* | *19.1* | *12.2* | *14.0* | *7.6* | *14.1* | *5.7* | *13.5* | *8.3* | *12.6* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.5 | 0.3 | 0.1 | Fold Induction (1000nM DHT) |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 13 | 480188 | 372188 | 374000 | 377113 | 342500 | 386988 | 378625 | 412125 | 443450 | 494463 | 529588 | |
| Std Dev | 25 | 75355 | 39136 | 28958 | 15597 | 29978 | 34672 | 35255 | 67339 | 21851 | 35984 | 24879 | |
| SEM | 13 | 37677 | 19568 | 14479 | 7799 | 14989 | 17336 | 17628 | 33670 | 10925 | 17992 | 12440 | |
| CV% | *200.0* | *13.7* | *10.5* | *7.7* | *4.1* | *8.8* | *9.0* | *9.3* | *16.3* | *4.9* | *7.3* | *4.7* | |

Mean VC 7938 Mean DHT 1000nM Control 372188

**Subtraction of VC from wells**

| ppDDE | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -7838 | 521113 | 1363 | 480763 | 409913 | 409313 | 407413 | 438063 | 403063 | 236063 | 120113 | 59113 | with 1nM DHT |
| B | -7638 | 466563 | -88 | 435113 | 396363 | 388913 | 464163 | 403513 | 412213 | 287963 | 100763 | 61513 | with 1nM DHT |
| C | -7788 | 478313 | -388 | 433863 | 376263 | 344213 | 404013 | 417213 | 371913 | 235213 | 107713 | 51813 | with 1nM DHT |
| D | -7888 | 414013 | -888 | 295963 | 305863 | 293413 | 391413 | 310313 | 366163 | 207663 | 121563 | 44163 | with 1nM DHT |
| E | -7888 | 370713 | 381213 | 365563 | 364913 | 307113 | 384313 | 423513 | 315763 | 434513 | 444913 | 557163 | with 1000nM DHT |
| F | -7938 | 465513 | 313813 | 341513 | 374663 | 317363 | 341313 | 350763 | 388013 | 407513 | 476513 | 513513 | with 1000nM DHT |
| G | -7938 | 546613 | 356463 | 350313 | 350113 | 338863 | 423813 | 354413 | 451363 | 439363 | 531313 | 499163 | with 1000nM DHT |
| H | -7938 | 506163 | 405513 | 406863 | 387013 | 374913 | 366763 | 354063 | 461613 | 460663 | 493363 | 516763 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 365156

| ppDDE | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -7813 | 470000 | 0 | 411425 | 372100 | 358963 | 416750 | 392275 | 388338 | 241475 | 112538 | 54150 |
| Std Dev | 133 | 44076 | 966 | 80008 | 46272 | 51467 | 32349 | 56458 | 22718 | 33589 | 10013 | 7833 |
| SEM | 66 | 22038 | 483 | 40004 | 23136 | 25733 | 16174 | 28229 | 11359 | 16795 | 5006 | 3916 |
| CV% | *-1.7* | *9.4* | | *19.4* | *12.4* | *14.3* | *7.8* | *14.4* | *5.9* | *13.9* | *8.9* | *14.5* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.5 | 0.2 | 0.1 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (Induced control))**

| ppDDE | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -1.9 | 126.7 | 0.3 | 116.9 | 99.6 | 99.5 | 99.0 | 106.5 | 98.0 | 57.1 | 29.2 | 14.4 | with 1nM DHT |
| B | -1.9 | 113.4 | 0.0 | 105.8 | 96.3 | 94.5 | 112.8 | 98.1 | 100.2 | 70.0 | 24.5 | 15.0 | with 1nM DHT |
| C | -1.9 | 116.3 | -0.1 | 105.5 | 91.5 | 83.7 | 98.2 | 101.4 | 90.4 | 57.2 | 26.2 | 12.6 | with 1nM DHT |
| D | -1.9 | 100.6 | -0.2 | 71.9 | 74.3 | 71.3 | 95.1 | 75.4 | 89.0 | 50.5 | 29.5 | 10.7 | with 1nM DHT |
| E | -2.2 | 101.5 | 104.4 | 100.1 | 99.9 | 84.1 | 105.2 | 116.0 | 86.5 | 118.0 | 121.8 | 152.6 | with 1000nM DHT |
| F | -2.2 | 127.5 | 85.9 | 93.5 | 102.6 | 86.9 | 93.5 | 96.1 | 106.3 | 111.6 | 130.5 | 140.6 | with 1000nM DHT |
| G | -2.2 | 149.7 | 97.6 | 95.9 | 95.9 | 92.8 | 116.1 | 97.1 | 123.6 | 120.3 | 145.5 | 136.7 | with 1000nM DHT |
| H | -2.2 | 138.6 | 111.1 | 111.4 | 106.0 | 102.7 | 100.4 | 97.0 | 126.4 | 126.2 | 135.1 | 141.5 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

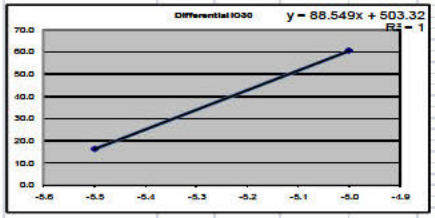
| ppDDE | blank | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.9 | 114.2 | 0.0 | 100.0 | 90.4 | 87.2 | 101.3 | 95.3 | 94.4 | 58.7 | 27.4 | |
| Std Dev | 0.0 | 10.7 | 0.2 | 19.4 | 11.2 | 12.5 | 7.9 | 13.7 | 5.5 | 8.2 | 2.4 | |
| SEM | 0.0 | 5.4 | 0.1 | 9.7 | 5.6 | 6.3 | 3.9 | 6.9 | 2.8 | 4.1 | 1.2 | |

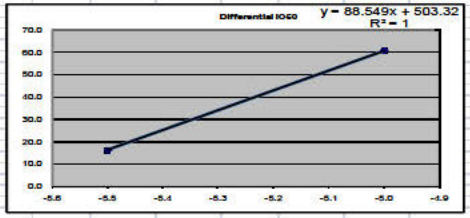
**High Agonist control, % of Maximal Induction Control (Average)**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.2 | 129.3 | 99.8 | 100.2 | 101.1 | 91.6 | 103.8 | 101.5 | 110.7 | 119.3 | 133.2 | |
| Std Dev | 0.0 | 20.6 | 10.7 | 7.9 | 4.3 | 8.2 | 9.5 | 9.7 | 18.4 | 6.0 | 9.9 | |
| SEM | 0.0 | 10.3 | 5.4 | 4.0 | 2.1 | 4.1 | 4.7 | 4.8 | 9.2 | 3.0 | 4.9 | |

| ppDDE | | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | -0.3 | 15.1 | 99.8 | 0.2 | 10.7 | 4.4 | 2.5 | 6.2 | 16.3 | 60.6 | 105.9 | |

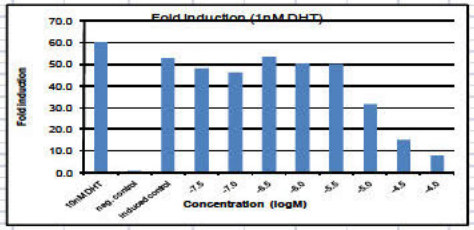
| | -5.5 | -5.0 | | -5.5 | -5.0 | | Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|---|---|---|---|---|---|---|
| Differential IC30 | 16.3 | 60.6 | Differential IC50 | 16.3 | 60.6 | | 100.0 | 27.4 | 72.6 |
| | -5.3 | | | -5.1 | | | | | |

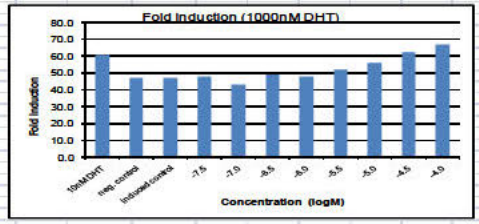



**FOLD INDUCTION**

| | 10nM DHT | neg. control | Induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 66.7 | 1.2 | 61.6 | 52.6 | 52.6 | 52.3 | 56.2 | 51.8 | 30.6 | 16.1 | 8.4 |
| | 59.8 | 1.0 | 55.8 | 50.9 | 50.0 | 59.5 | 51.8 | 52.9 | 37.3 | 13.7 | 8.7 |
| | 61.3 | 1.0 | 56.7 | 48.4 | 44.4 | 51.9 | 53.6 | 47.9 | 30.6 | 14.6 | 7.5 |
| | 53.2 | 0.9 | 38.3 | 39.5 | 38.0 | 50.3 | 40.1 | 47.1 | 27.2 | 16.3 | 6.6 |
| | 47.7 | 49.0 | 47.1 | 47.0 | 39.7 | 49.4 | 54.4 | 40.8 | 55.7 | 57.1 | 71.2 |
| | 59.6 | 40.5 | 44.0 | 48.2 | 41.0 | 44.0 | 45.2 | 49.9 | 52.3 | 61.0 | 65.7 |
| | 69.9 | 45.9 | 45.1 | 45.1 | 43.7 | 54.4 | 45.7 | 57.9 | 56.4 | 67.9 | 63.9 |
| | 64.8 | 52.1 | 52.3 | 49.8 | 48.2 | 47.2 | 45.6 | 59.2 | 59.0 | 63.2 | 66.1 |
| Mean | 60.2 | 1.0 | 52.6 | 47.9 | 46.2 | 53.5 | 50.4 | 49.9 | 31.4 | 15.2 | 7.6 |
| Std Dev | 5.6 | 0.1 | 10.1 | 5.8 | 6.5 | 4.1 | 7.1 | 2.9 | 4.2 | 1.3 | 1.0 |
| SEM | 2.8 | 0.1 | 5.0 | 2.9 | 3.2 | 2.0 | 3.6 | 1.4 | 2.1 | 0.6 | 0.5 |
| CV% | *9.2* | *12.2* | *19.1* | *12.2* | *14.0* | *7.6* | *14.1* | *5.7* | *13.5* | *8.3* | *12.6* |
| Relative Tran | 100 | 1.7 | 87.7 | 79.5 | 76.8 | 88.9 | 83.7 | 82.9 | 52.2 | 25.2 | 13.0 |
| Mean | 60.5 | 46.9 | 47.1 | 47.5 | 43.1 | 48.8 | 47.7 | 51.9 | 55.9 | 62.3 | 66.7 |
| Std Dev | 9.5 | 4.9 | 3.6 | 2.0 | 3.8 | 4.4 | 4.4 | 8.5 | 2.8 | 4.5 | 3.1 |
| SEM | 4.7 | 2.5 | 1.8 | 1.0 | 1.9 | 2.2 | 2.2 | 4.2 | 1.4 | 2.3 | 1.6 |
| CV% | *15.7* | *10.5* | *7.7* | *4.1* | *8.8* | *9.0* | *9.3* | *16.3* | *4.9* | *7.3* | *4.7* |
| Relative Tran | 100 | 77.5 | 77.9 | 78.5 | 71.3 | 80.6 | 78.8 | 85.8 | 92.3 | 103.0 | 110.3 |

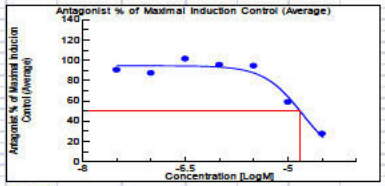



**Viability (% Control)**

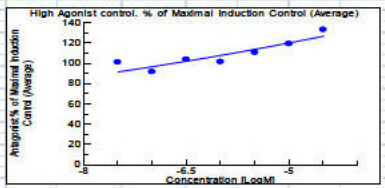
| ppDDE | 10nM DHT | neg. cont | Induced | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 94 | 100 | 101 | 101 | 101 | 101 | 102 | 93 | 92 | 96 | 66 |
| StdDev | 3 | 7 | 8 | 8 | 8 | 13 | 11 | 8 | 8 | 6 | 3 |
| SEM | 1 | 3 | 3 | 3 | 3 | 5 | 4 | 3 | 3 | 2 | 1 |
| %CV | 3.5 | 7.1 | 7.6 | 8.3 | 8.2 | 12.9 | 10.6 | 8.9 | 8.7 | 5.8 | 4.2 |

Fit -4.8
Chart #Ok




0 Bottom
94.9 Top
-4.8 EC50
-1.5 Hill slope

Fit <-7.5
Chart #Ok




0 Bottom
1388.0 Top
15.0 EC50
0.1 Hill slope

# Data Spreadsheets

| | | | | | | |
|---|---|---|---|---|---|---|
| Experiment date: | 3Nov2011 | | | blank = no cells, vehicle control | | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | | | neg. control = cells + vehicle. | | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:26 | | | | Study Number: | 9070-100107ARTA | |
| Assay Conducted by: | [redacted] | | | Compound | ppDDE | |

| ppDDE Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 228450 | 4050 | 4000 | 4600 | 6450 | 5400 | 6200 | 8400 | 13400 | 11800 | 12550 | |
| B | 0 | 299400 | 5150 | 3900 | 3050 | 5000 | 5200 | 4050 | 7150 | 9200 | 10650 | 13150 | |
| C | 0 | 256900 | 4100 | 4650 | 4750 | 4850 | 5050 | 5300 | 6000 | 9450 | 10750 | 18000 | |
| D | 50 | 325450 | 4250 | 5200 | 4700 | 4900 | 7100 | 5300 | 9800 | 11100 | 8250 | 14300 | |
| E | 0 | 317100 | 4600 | 3700 | 5100 | 5100 | 5700 | 4300 | 7400 | 8550 | 10500 | 14850 | |
| F | 0 | 291550 | 4850 | 3800 | 4350 | 4400 | 3600 | 3450 | 7250 | 7200 | 12150 | 17400 | |
| G | *0* | *132100* | *10850* | *22300* | *7350* | *15700* | *9000* | *9150* | *15500* | *21000* | *14700* | *27750* | with 10µM Nilutamide |
| H | *0* | *78000* | *6250* | *6350* | *4300* | *5000* | *7050* | *6000* | *10450* | *10300* | *10600* | *10750* | with 10µM Nilutamide |
| Mean | 8 | 286475 | 4354 | | 4425 | 5117 | 5342 | 4767 | 7667 | 9817 | 10683 | 15042 | |
| Std Dev | 20 | 37125 | 520 | | 716 | 696 | 1128 | 1009 | 1294 | 2166 | 1368 | 2222 | |
| SEM | 8 | 15156 | 150 | | 292 | 284 | 461 | 412 | 528 | 884 | 559 | 907 | |
| CV% | *244.9* | *13.0* | *11.95* | | *16.2* | *13.6* | *21.1* | *21.2* | *16.9* | *22.1* | *12.8* | *14.8* | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | |
| Rows G&H | | | | | | | | | | | | | |
| Mean | 0 | 105050 | 12938 | | 5825 | 10350 | 8025 | 7575 | 12975 | 15650 | 12650 | 19250 | |
| Std Dev | 0 | 38254 | 7981 | | 2157 | 7566 | 1379 | 2227 | 3571 | 7566 | 2899 | 12021 | |

Mean VC 4354 Mean Nilutamide Control 12938

**Subtraction of VC from wells**

| ppDDE Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 224096 | -304 | -354 | 246 | 2096 | 1046 | 1846 | 4046 | 9046 | 7446 | 8196 | |
| B | 0 | 295046 | 796 | -454 | -1304 | 646 | 846 | -304 | 2796 | 4846 | 6296 | 8796 | |
| C | 0 | 252546 | -254 | 296 | 396 | 496 | 696 | 946 | 1646 | 5096 | 6396 | 13646 | |
| D | 50 | 321096 | -104 | 846 | 346 | 546 | 2746 | 946 | 5446 | 6746 | 3896 | 9946 | |
| E | 0 | 312746 | 246 | -654 | 746 | 746 | 1346 | -54 | 3046 | 4196 | 6146 | 10496 | |
| F | 0 | 287196 | 496 | -554 | -4 | 46 | -754 | -904 | 2896 | 2846 | 7796 | 13046 | |
| G | 0 | 119163 | 3913 | 9363 | -5588 | 2763 | -3938 | -3788 | 2563 | 8063 | 1763 | 14813 | with 10µM Nilutamide |
| H | 0 | 65063 | -6688 | -6588 | -8638 | -7938 | -5888 | -6938 | -2488 | -2638 | -2338 | -2188 | with 10µM Nilutamide |

**Corrected Data Means**

| ppDDE Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 8 | 282121 | 0 | | 71 | 763 | 988 | 413 | 3313 | 5463 | 6329 | 10688 |
| Std Dev | 20 | 37125 | 520 | | 716 | 696 | 1128 | 1009 | 1294 | 2166 | 1368 | 2222 |
| SEM | 8 | 15156 | 150 | | 292 | 284 | 461 | 412 | 528 | 884 | 559 | 907 |
| CV% | *244.9* | *13.2* | | | *1010.9* | *91.3* | *114.2* | *244.6* | *39.1* | *39.6* | *21.6* | *20.8* |
| Relative Transcriptional Activity | | 1.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

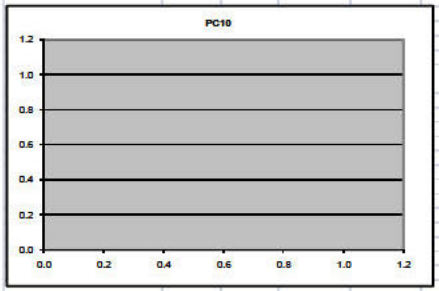
**Agonist: % of Maximal Induction Control**

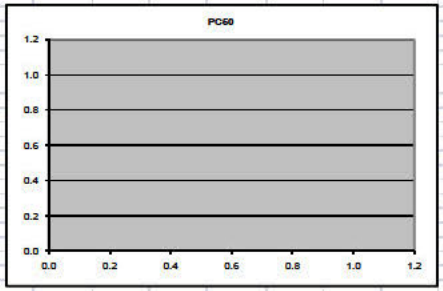
| ppDDE Ag | blank | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0.0 | 79.4 | -0.1 | -0.1 | 0.1 | 0.7 | 0.4 | 0.7 | 1.4 | 3.2 | 2.6 | 2.9 | |
| B | 0.0 | 104.6 | 0.3 | -0.2 | -0.5 | 0.2 | 0.3 | -0.1 | 1.0 | 1.7 | 2.2 | 3.1 | |
| C | 0.0 | 89.5 | -0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.6 | 1.8 | 2.3 | 4.8 | |
| D | 0.0 | 113.8 | 0.0 | 0.3 | 0.1 | 0.2 | 1.0 | 0.3 | 1.9 | 2.4 | 1.4 | 3.5 | |
| E | 0.0 | 110.9 | 0.1 | -0.2 | 0.3 | 0.3 | 0.5 | 0.0 | 1.1 | 1.5 | 2.2 | 3.7 | |
| F | 0.0 | 101.8 | 0.2 | -0.2 | 0.0 | 0.0 | -0.3 | -0.3 | 1.0 | 1.0 | 2.8 | 4.6 | |
| G | 0.0 | 42.2 | 1.4 | 3.3 | -2.0 | 1.0 | -1.4 | -1.3 | 0.9 | 2.9 | 0.6 | 5.3 | with 10µM Nilutamide |
| H | 0.0 | 23.1 | -2.4 | -2.3 | -3.1 | -2.8 | -2.1 | -2.5 | -0.9 | -0.9 | -0.8 | -0.8 | with 10µM Nilutamide |

**% of Maximal Induction Control**

| ppDDE Ag | blank | 10nM DHT | neg. control | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.0 | 100.0 | 0.0 | | 0.0 | 0.3 | 0.4 | 0.1 | 1.2 | 1.9 | 2.2 | |
| Std Dev | 0.0 | 13.2 | 0.2 | | 0.3 | 0.2 | 0.4 | 0.4 | 0.5 | 0.8 | 0.5 | |
| SEM | 0.0 | 5.4 | 0.1 | | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.3 | 0.2 | |

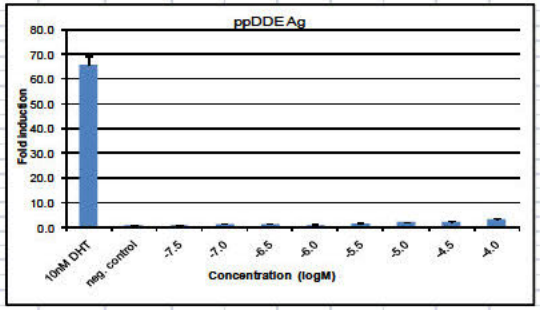
PC10 [ ] [ ] PC50 [ ] [ ]

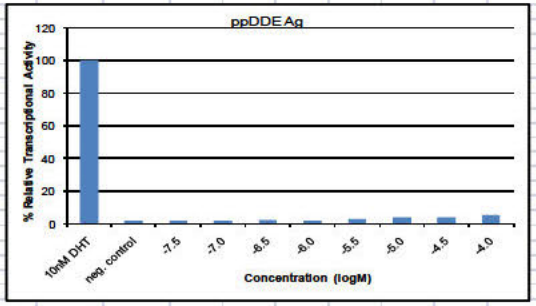



**FOLD INDUCTION**

| | 10nM DHT | neg. control | neg. control | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 52.5 | 0.9 | 0.9 | 1.1 | 1.5 | 1.2 | 1.4 | 1.9 | 3.1 | 2.7 | 2.9 |
| | 68.8 | 1.2 | 0.9 | 0.7 | 1.1 | 1.2 | 0.9 | 1.6 | 2.1 | 2.4 | 3.0 |
| | 59.0 | 0.9 | 1.1 | 1.1 | 1.1 | 1.2 | 1.2 | 1.4 | 2.2 | 2.5 | 4.1 |
| | 74.7 | 1.0 | 1.2 | 1.1 | 1.1 | 1.6 | 1.2 | 2.3 | 2.5 | 1.9 | 3.3 |
| | 72.8 | 1.1 | 0.8 | 1.2 | 1.2 | 1.3 | 1.0 | 1.7 | 2.0 | 2.4 | 3.4 |
| | 67.0 | 1.1 | 0.9 | 1.0 | 1.0 | 0.8 | 0.8 | 1.7 | 1.7 | 2.8 | 4.0 |
| Mean | 65.8 | 1.0 | | 1.0 | 1.2 | 1.2 | 1.1 | 1.8 | 2.3 | 2.5 | 3.5 |
| Std Dev | 8.5 | 0.1 | | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.5 | 0.3 | 0.5 |
| SEM | 3.5 | 0.0 | | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 |
| CV% | *13.0* | *11.9* | | *16.2* | *13.6* | *21.1* | *21.2* | *16.9* | *22.1* | *12.8* | *14.8* |
| Relative Tran | 100 | 1.5 | | 1.5 | 1.8 | 1.9 | 1.7 | 2.7 | 3.4 | 3.7 | 5.3 |

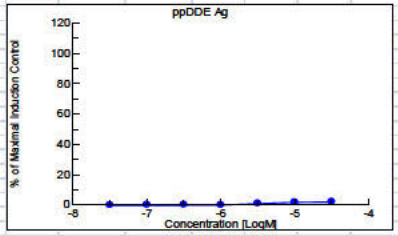



**Viability (% Control)**

| ppDDE Ag | 10nM DHT | neg. con | neg. con | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 87 | 100 | 105 | 106 | 108 | 113 | 117 | 110 | 103 | 118 | 68 |
| StdDev | 4 | 8 | 16 | 13 | 9 | 15 | 16 | 16 | 16 | 11 | 5 |
| SEM | 2 | 3 | 7 | 5 | 4 | 6 | 6 | 6 | 7 | 4 | 2 |
| %CV | 4.8 | 8.5 | 15.2 | 12.5 | 8.3 | 13.0 | 13.2 | 14.2 | 15.7 | 9.3 | 7.2 |

Fit #Intense
Chart #Ok




0 Bottom
2.3 Top
-5.5 EC50
1.5 Hill slope

# Data Spreadsheets



| | | | |
|---|---|---|---|
| Experiment date: | 3Nov2011 | blank = no cells, vehicle control | Spreadsheet locked on: 11/10/2011 |
| TopCount Model B9912V, Serial# 408672 | | neg. control = cells + vehicle. | Green shaded areas unlocked cells for data entry |
| 11/11/11 15:26 | | Study Number: | 9070-100107ARTA |
| Assay Conducted by: | | Compound | ppDDE |

| ppDDE Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 0 | 179850 | 3600 | 157150 | 181100 | 200700 | 214150 | 162900 | 177300 | 85800 | 53800 | 25950 | with 1nM DHT |
| B | 0 | 230150 | 3750 | 161450 | 190300 | 187300 | 224500 | 179000 | 178750 | 130400 | 58950 | 30150 | with 1nM DHT |
| C | 0 | 247100 | 4050 | 185750 | 215100 | 183150 | 178400 | 173250 | 158000 | 120200 | 64650 | 27500 | with 1nM DHT |
| D | 0 | 264500 | 3950 | 249350 | 245050 | 227150 | 285250 | 239750 | 254800 | 141150 | 66600 | 34050 | with 1nM DHT |
| E | 50 | 232350 | 258750 | 262050 | 267150 | 239200 | 230100 | 296050 | 326450 | 338550 | 328600 | 247100 | with 1000nM DHT |
| F | 0 | 299200 | 289000 | 283400 | 224750 | 212250 | 312100 | 253000 | 284850 | 276900 | 247000 | 263450 | with 1000nM DHT |
| G | 50 | 243300 | 212300 | 209450 | 215750 | 192750 | 241900 | 227400 | 273600 | 254200 | 276150 | 326900 | with 1000nM DHT |
| H | 0 | 221400 | 167300 | 166300 | 160500 | 149750 | 171450 | 143750 | 145500 | 196600 | 166800 | 176400 | with 1000nM DHT |
| Mean | 0 | 230400 | 3838 | 188425 | 207888 | 199575 | 225575 | 188725 | 192213 | 119388 | 61000 | 29413 | Fold Induction (1nM DH |
| Std Dev | 0 | 36501 | 202 | 42524 | 28635 | 19850 | 44416 | 34663 | 42784 | 23970 | 5794 | 3545 | |
| SEM | 0 | 18251 | 101 | 21262 | 14318 | 9925 | 22208 | 17331 | 21392 | 11985 | 2897 | 1772 | |
| CV% | | 15.8 | 5.3 | 22.6 | 13.8 | 9.9 | 19.7 | 18.4 | 22.3 | 20.1 | 9.5 | 12.1 | |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.9 | 1.0 | 0.8 | 0.8 | 0.5 | 0.3 | 0.1 | |
| Rows E-H | | | | | | | | | | | | | |
| Mean | 25 | 249063 | 234388 | 218300 | 217038 | 198488 | 238813 | 223050 | 257600 | 267063 | 254138 | 253463 | Fold Induction (1000nM |
| Std Dev | 29 | 34600 | 56951 | 52407 | 43852 | 37662 | 57713 | 62290 | 78104 | 57907 | 66868 | 61838 | |
| SEM | 14 | 17300 | 28475 | 26203 | 21926 | 18831 | 28857 | 31145 | 39052 | 28954 | 33434 | 30919 | |
| CV% | 115.5 | 13.9 | 24.3 | 24.0 | 20.2 | 19.0 | 24.2 | 27.9 | 30.3 | 21.7 | 26.3 | 24.4 | |

Mean VC 3838 Mean DHT 1000nM Control 234388

**Subtraction of VC from wells**

| ppDDE Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -3838 | 176013 | -238 | 153313 | 177263 | 196863 | 210313 | 159063 | 173463 | 81963 | 49963 | 22113 | with 1nM DHT |
| B | -3838 | 226313 | -88 | 157613 | 186463 | 183463 | 220663 | 175163 | 174913 | 126563 | 55113 | 26313 | with 1nM DHT |
| C | -3838 | 243263 | 213 | 181913 | 211263 | 179313 | 174563 | 169413 | 154163 | 116363 | 60813 | 23663 | with 1nM DHT |
| D | -3838 | 260663 | 113 | 245513 | 241213 | 223313 | 281413 | 235913 | 250963 | 137313 | 62763 | 30213 | with 1nM DHT |
| E | -3788 | 228513 | 254913 | 258213 | 263313 | 235363 | 226263 | 292213 | 322613 | 334713 | 322763 | 243263 | with 1000nM DHT |
| F | -3838 | 295363 | 295163 | 199563 | 220913 | 208413 | 308263 | 221163 | 280813 | 273063 | 243163 | 259613 | with 1000nM DHT |
| G | -3788 | 239463 | 208463 | 205613 | 211913 | 188913 | 237763 | 223563 | 269963 | 250363 | 272313 | 323063 | with 1000nM DHT |
| H | -3838 | 217563 | 163663 | 164463 | 156663 | 145913 | 167613 | 139913 | 141663 | 194763 | 162963 | 172563 | with 1000nM DHT |

**VC Corrected Data Means** AVG cntrl 222508

| ppDDE Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -3838 | 226663 | 0 | 184588 | 204050 | 195738 | 221738 | 184888 | 188375 | 115550 | 57163 | 25575 |
| Std Dev | 0 | 36501 | 202 | 42524 | 28635 | 19850 | 44416 | 34663 | 42784 | 23970 | 5794 | 3545 |
| SEM | 0 | 18251 | 101 | 21262 | 14318 | 9925 | 22208 | 17331 | 21392 | 11985 | 2897 | 1772 |
| CV% | 0.0 | 16.1 | | 23.0 | 14.0 | 10.1 | 20.0 | 18.7 | 22.7 | 20.7 | 10.1 | 13.9 |
| Relative Transcriptional Activity | | 1.0 | 0.0 | 0.8 | 0.9 | 0.9 | 1.0 | 0.8 | 0.8 | 0.5 | 0.3 | 0.1 |

**Antagonist: % of 1 nM DHT (Normalized value of each well/mean value of normalized mean (induced control))**

| ppDDE Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | -2.1 | 95.4 | -0.1 | 83.1 | 96.0 | 106.6 | 113.9 | 86.2 | 94.0 | 44.4 | 27.1 | 12.0 | with 1nM DHT |
| B | -2.1 | 122.6 | 0.0 | 85.4 | 101.0 | 99.4 | 119.5 | 94.9 | 94.8 | 68.6 | 29.9 | 14.3 | with 1nM DHT |
| C | -2.1 | 131.8 | 0.1 | 98.6 | 114.5 | 97.1 | 94.6 | 91.8 | 83.5 | 63.0 | 32.9 | 12.8 | with 1nM DHT |
| D | -2.1 | 141.2 | 0.1 | 133.0 | 130.7 | 121.0 | 152.5 | 127.8 | 136.0 | 74.4 | 34.0 | 16.4 | with 1nM DHT |
| E | -1.7 | 102.7 | 114.6 | 129.5 | 118.3 | 105.8 | 101.7 | 131.3 | 146.0 | 150.4 | 145.1 | 109.3 | with 1000nM DHT |
| F | -1.7 | 132.7 | 132.7 | 89.7 | 99.3 | 93.7 | 138.5 | 99.4 | 126.2 | 122.7 | 109.3 | 116.7 | with 1000nM DHT |
| G | -1.7 | 107.6 | 93.7 | 92.4 | 95.2 | 84.9 | 106.9 | 100.5 | 121.3 | 112.5 | 122.4 | 145.2 | with 1000nM DHT |
| H | -1.7 | 97.8 | 73.6 | 73.9 | 70.4 | 65.6 | 75.3 | 62.9 | 63.7 | 87.5 | 73.2 | 77.6 | with 1000nM DHT |

**Antagonist % of Maximal Induction Control (Average)**

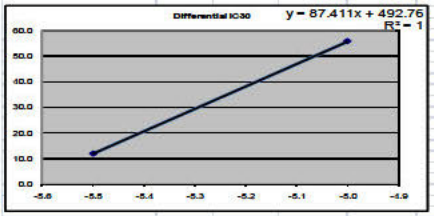
| ppDDE Antag | blank | 10nM DHT | neg. control | induced cont | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -2.1 | 122.7 | 0.0 | 100.0 | 110.5 | 106.0 | 120.1 | 100.2 | 102.1 | 62.6 | 31.0 | |
| Std Dev | 0.0 | 19.8 | 0.1 | 23.0 | 15.5 | 10.8 | 24.1 | 18.8 | 23.2 | 13.0 | 3.1 | |
| SEM | 0.0 | 5.5 | 0.1 | 11.5 | 7.8 | 5.4 | 12.0 | 9.4 | 11.6 | 6.5 | 1.6 | |

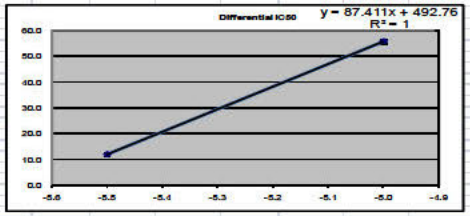
**High Agonist control, % of Maximal Induction Control (Average)**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | -1.7 | 110.2 | 103.6 | 96.4 | 95.8 | 87.5 | 105.6 | 98.5 | 114.0 | 118.3 | 112.5 | |
| Std Dev | 0.0 | 15.6 | 25.6 | 23.6 | 19.7 | 16.9 | 25.9 | 28.0 | 35.1 | 26.0 | 30.1 | |
| SEM | 0.0 | 7.8 | 12.8 | 11.8 | 9.9 | 8.5 | 13.0 | 14.0 | 17.6 | 13.0 | 15.0 | |

| ppDDE Antag | | | | | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Differential | 0.4 | -12.5 | 103.6 | -3.6 | -14.7 | -18.6 | -14.5 | -1.6 | 12.0 | 55.7 | 81.5 | |

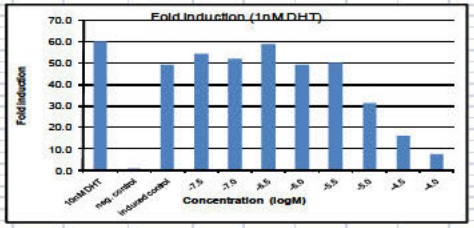
| | -5.5 | -5.0 | | | -5.5 | -5.0 | | Relative Inhibitory Concentration Max (RICMax) | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Differential IC30 | 12.0 | 55.7 | Differential IC60 | | 12.0 | 55.7 | | 100.0 | 31.0 | 69.0 |
| | -5.3 | | | | -5.1 | | | | | |

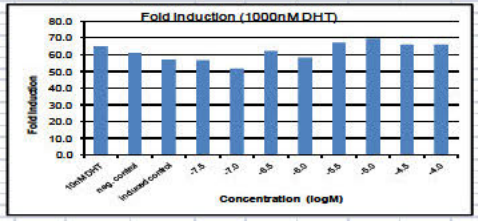



**FOLD INDUCTION**

| | 10nM DH | neg. control | Induced cor | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 46.9 | 0.9 | 41.0 | 47.2 | 52.3 | 55.8 | 42.4 | 46.2 | 22.4 | 14.0 | 6.8 |
| | 60.0 | 1.0 | 42.1 | 49.6 | 48.8 | 58.5 | 46.6 | 46.6 | 34.0 | 15.4 | 7.9 |
| | 64.4 | 1.1 | 48.4 | 56.1 | 47.7 | 46.5 | 45.1 | 41.2 | 31.3 | 16.8 | 7.2 |
| | 68.9 | 1.0 | 65.0 | 63.9 | 59.2 | 74.3 | 62.5 | 66.4 | 36.8 | 17.4 | 8.9 |
| | 60.5 | 67.4 | 76.1 | 69.6 | 62.3 | 60.0 | 77.1 | 85.1 | 88.2 | 85.1 | 64.4 |
| | 78.0 | 77.9 | 53.0 | 58.6 | 55.3 | 81.3 | 58.6 | 74.2 | 72.2 | 64.4 | 68.7 |
| | 63.4 | 55.3 | 54.6 | 56.2 | 50.2 | 63.0 | 59.3 | 71.3 | 66.2 | 72.0 | 85.2 |
| | 57.7 | 43.6 | 43.9 | 41.8 | 39.0 | 44.7 | 37.5 | 37.9 | 51.8 | 43.5 | 46.0 |
| Mean | 60.0 | 1.0 | 49.1 | 54.2 | 52.0 | 58.8 | 49.2 | 50.1 | 31.1 | 15.9 | 7.7 |
| Std Dev | 9.5 | 0.1 | 11.1 | 7.5 | 5.2 | 11.6 | 9.0 | 11.1 | 6.2 | 1.5 | 0.9 |
| SEM | 4.8 | 0.0 | 5.5 | 3.7 | 2.6 | 5.8 | 4.5 | 5.6 | 3.1 | 0.8 | 0.5 |
| CV% | 15.8 | 5.3 | 22.6 | 13.8 | 9.9 | 19.7 | 18.4 | 22.3 | 20.1 | 9.5 | 12.1 |
| Relative Trar | 100 | 1.7 | 81.8 | 90.2 | 86.6 | 97.9 | 81.9 | 83.4 | 51.8 | 26.5 | 12.8 |
| Mean | 64.9 | 61.1 | 56.9 | 56.6 | 51.7 | 62.2 | 58.1 | 67.1 | 69.6 | 66.2 | 66.0 |
| Std Dev | 9.0 | 14.8 | 13.7 | 11.4 | 9.8 | 15.0 | 16.2 | 20.4 | 15.1 | 17.4 | 16.1 |
| SEM | 4.5 | 7.4 | 6.8 | 5.7 | 4.9 | 7.5 | 8.1 | 10.2 | 7.5 | 8.7 | 8.1 |
| CV% | 13.9 | 24.3 | 24.0 | 20.2 | 19.0 | 24.2 | 27.9 | 30.3 | 21.7 | 26.3 | 24.4 |
| Relative Trar | 100 | 94.1 | 87.6 | 87.1 | 79.7 | 95.9 | 89.6 | 103.4 | 107.2 | 102.0 | 101.8 |

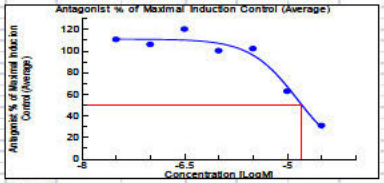



**Viability (% Control)**

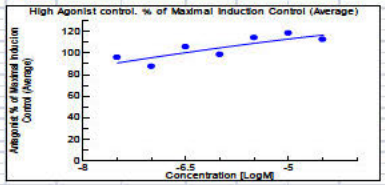
| ppDDE Antag | 10nM DHT | neg. con | Induced ( | -7.5 | -7.0 | -6.5 | -6.0 | -5.5 | -5.0 | -4.5 | -4.0 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 87 | 100 | 105 | 106 | 108 | 113 | 117 | 110 | 103 | 118 | 68 |
| StdDev | 4 | 8 | 16 | 13 | 9 | 15 | 16 | 16 | 16 | 11 | 5 |
| SEM | 2 | 3 | 7 | 5 | 4 | 6 | 6 | 6 | 7 | 4 | 2 |
| %CV | 4.8 | 8.5 | 15.2 | 12.5 | 8.3 | 13.0 | 13.2 | 14.2 | 15.7 | 9.3 | 7.2 |

Fit Chart -4.8 #Ok




0 Bottom
111.4 Top
-4.9 EC50
-1.3 Hill slope

Fit Chart <-7.5 #Ok




0 Bottom
149.1 Top
-9.1 EC50
0.1 Hill slope

## APPENDIX 2 Deviation Forms

Form #: SOP-1003-F-1.0

CeeTox
*In vitro models to predict toxicity*

Deviation & Investigation

Study Number (if applicable): 9070-100107ARTA

Date of Reporting: 11Nov2011 Reporting Associate: [redacted]

Date of Occurrence: 13Oct2011,20Oct2011 3Nov2011 Associate Involved: [redacted]

*Description of Deviation:*

Oxybenzone (2-hydroxy-4-methoxybenzone) lot number in the protocol was 20080801. Lot supplied by sponsor was 20100801.

wrong date: should be 11 Nov 2011 12 Dec 2011

Signature [redacted] Date: 10 Nov 2011

(Reporting Associate)

Type of Deviation (determined by Study Director/Principal Investigator):

☐SOP Deviation ☒Protocol Deviation ☐GLP Deviation ☐No Deviation

*Summary of Deviation Investigation by SD/PI/Test Facility Management/Designee:*

Compound lot supplied by sponsor differs from the lot indicated in the protocol.

*Action Taken and Determination of Impact on Study Data and/or Facility Compliance:* 11 Nov 2011

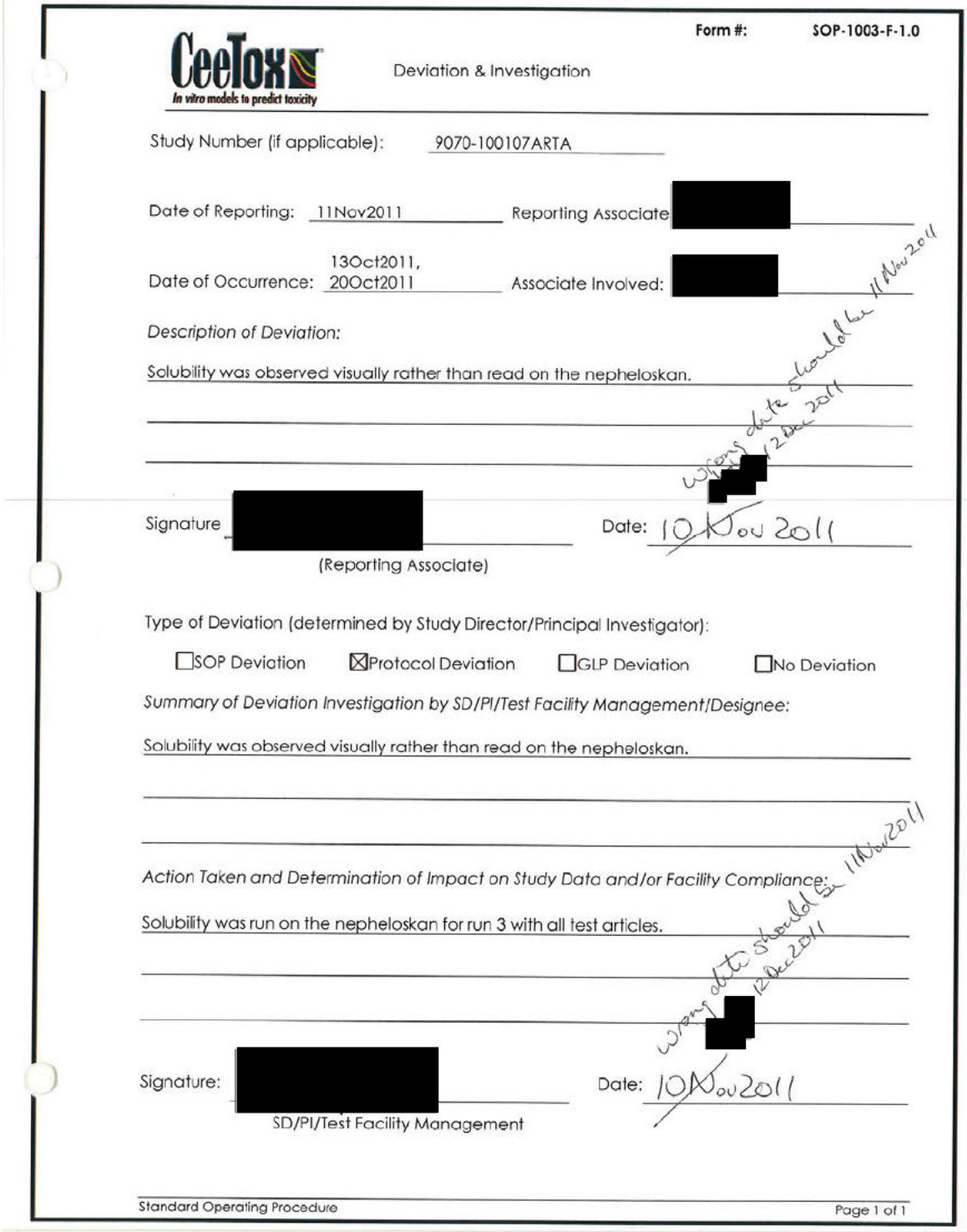
No impact on study

wrong date: should be 12 Dec 2011

Signature: [redacted] Date: 10 Nov 2011

SD/PI/Test Facility Management

Standard Operating Procedure Page 1 of 1



CeeTox
In vitro models to predict toxicity

Form #: SOP-1003-F-1.0

Deviation & Investigation

Study Number (if applicable): 9070-100107ARTA

Date of Reporting: 11Nov2011 Reporting Associate [redacted]

Date of Occurrence: 13Oct2011, 20Oct2011 Associate Involved: [redacted]

*Description of Deviation:*

Solubility was observed visually rather than read on the nepheloskan.

wrong date should be 11Nov2011 [redacted] 12 Dec 2011

Signature [redacted] Date: 10 Nov 2011

(Reporting Associate)

Type of Deviation (determined by Study Director/Principal Investigator):

☐SOP Deviation ☒Protocol Deviation ☐GLP Deviation ☐No Deviation

*Summary of Deviation Investigation by SD/PI/Test Facility Management/Designee:*

Solubility was observed visually rather than read on the nepheloskan.

*Action Taken and Determination of Impact on Study Data and/or Facility Compliance:*

Solubility was run on the nepheloskan for run 3 with all test articles.

wrong date should be 11Nov2011 12Dec2011 [redacted]

Signature: [redacted] Date: 10 Nov 2011

SD/PI/Test Facility Management

Standard Operating Procedure Page 1 of 1

Form #: SOP-1003-F-1.0

CeeTox
*In vitro models to predict toxicity*

Deviation & Investigation

Study Number (if applicable): 9070-100107ARTA

Date of Reporting: 11Nov2011 Reporting Associate: [redacted]

Date of Occurrence: 13Oct2011,20Oct2011 3Nov2011 Associate Involved: [redacted]

*Description of Deviation:*

According to the protocol, the final percentage of DMSO in dosing solution should be 0.1% (v/v). The actual final DMSO percentage is 0.5%.

Signature [redacted] Date: 11 Nov 2011
(Reporting Associate)

Type of Deviation (determined by Study Director/Principal Investigator):

☐SOP Deviation ☒Protocol Deviation ☐GLP Deviation ☐No Deviation

*Summary of Deviation investigation by SD/PI/Test Facility Management/Designee:*

The final percentage of DMSO in dosing solutions was 0.5%.

*Action Taken and Determination of Impact on Study Data and/or Facility Compliance:*

No impact on study. The vehicle controls included in this study and used for comparison also had 0.5% DMSO.

Signature: [redacted] Date: 11 Nov 2011
SD/PI/Test Facility Management

Standard Operating Procedure Page 1 of 1

Form #: SOP-1003-F-1.0

CeeTox
*In vitro models to predict toxicity*

Deviation & Investigation

Study Number (if applicable): 9070-100107ARTA

Date of Reporting: 8Dec2011 Reporting Associate: [redacted]

Date of Occurrence: 13Oct2011,20Oct2011, 3Nov2011 Associate Involved: [redacted]

*Description of Deviation:*

The purity used for methoxycinnamate was taken from the MSDS rather than the C of A (98% vs 99.8% respectively).

Signature [redacted] Date: 8 Dec 2011

(Reporting Associate)

Type of Deviation (determined by Study Director/Principal Investigator):

☐SOP Deviation ☐Protocol Deviation ☒GLP Deviation ☐No Deviation

*Summary of Deviation Investigation by SD/PI/Test Facility Management/Designee:*

The wrong purity was used to prepare the initial stock.

*Action Taken and Determination of Impact on Study Data and/or Facility Compliance:*

No impact on study as the difference between the actual purity and the purity used was 1.8%, the difference was negligible.

Signature: [redacted] Date: 8 Dec 2011

SD/PI/Test Facility Management

Standard Operating Procedure Page 1 of 1

Form #: SOP-1003-F-1.0

CeeTox
*In vitro models to predict toxicity*

Deviation & Investigation

Study Number (if applicable): 9070-100107ARTA

Date of Reporting: 8Dec2011 Reporting Associate: [redacted]

Date of Occurrence: 6Oct2011, 31Oct2011 Associate Involved: [redacted]

*Description of Deviation:*

According to the protocol, the study director, study monitor, and sponsor will sign any protocol amendments. One protocol amendment signed on 6Oct2011, and two protocol amendments signed 31Oct2011 did not have study monitor or sponsor signature. They did receive copies of the protocol amendments.

Signature [redacted] Date: 8 Dec 2011

(Reporting Associate)

Type of Deviation (determined by Study Director/Principal Investigator):

☐SOP Deviation ☒Protocol Deviation ☐GLP Deviation ☐No Deviation

*Summary of Deviation Investigation by SD/PI/Test Facility Management/Designee:*

Study monitor and sponsor signatures were not obtained for protocol amendments.

*Action Taken and Determination of Impact on Study Data and/or Facility Compliance:*

Protocol amendments after October for this study included study monitor signature.

Signature: [redacted] Date: 8 Dec 2011

SD/PI/Test Facility Management

Standard Operating Procedure Page 1 of 1

Form #: SOP-1003-F-1.0

CeeTox
*In vitro models to predict toxicity*

Deviation & Investigation

Study Number (if applicable): 9070-100107ARTA

Date of Reporting: 24Jan2012 Reporting Associate: [redacted]

Date of Occurrence: 8Dec2012 Associate Involved: [redacted]

*Description of Deviation:*

The hard copies of the two deviations signed and scanned on 8Dec2012 were misplaced.

Signature [redacted] Date: 24Jan 2012

(Reporting Associate)

Type of Deviation (determined by Study Director/Principal Investigator):

☐SOP Deviation ☐Protocol Deviation ☒GLP Deviation ☐No Deviation

*Summary of Deviation Investigation by SD/PI/Test Facility Management/Designee:*

The hard copies of the two deviations signed and scanned on 8Dec2012 were misplaced.

*Action Taken and Determination of Impact on Study Data and/or Facility Compliance:*

No impact on the study as the electronic copy was retained.

Signature: [redacted] Date: 24Jan 2012

SD/PI/Test Facility Management

Standard Operating Procedure Page 1 of 1

Form #: SOP-1003-F-1.0

CeeTox
*In vitro models to predic toxicity*

Deviation & Investigation

Study Number (if applicable): 9070-100107ARTA

Date of Reporting: 27Jan2012 Reporting Associate [redacted]

Date of Occurrence: 19Oct2011 and 02Nov2011 Associate Involved: [redacted]

*Description of Deviation:*

The time of seedng was verbally communicated but not recorded.

Signature [redacted] Date: 27 Jan 2012

(Reporting Associate)

Type of Deviation (determined by Study Director/Principal Investigator):

☐SOP Deviation ☐Protocol Deviation ☒GLP Deviation ☐No Deviation

*Summary of Deviation Investigation by SD/PI/Test Facility Management/Designee:*

The time of seeding was verbally communicated but not recorded.

*Action Taken and Determination of Impact on Study Data and/or Facility Compliance:*

No impact on study.

Signature [redacted] Date: 27 Jan 2012

SD/PI/Test Facility Management

Standard Operating Procedure Page 1 of 1

## APPENDIX 3 Certificate of Analysis – Octylsalate



# Certificate of Analysis

SIGMA-ALDRICH

| | |
|---|---|
| **Product Name** | 2-Ethylhexyl salicylate, ≥99% |
| **Product Number** | W514500 |
| **Product Brand** | ALDRICH |
| **CAS Number** | 118-60-5 |
| **Molecular Formula** | $(HO)C_6H_4CO_2CH_2CH(C_2H_5)(CH_2)_3CH_3$ |
| **Molecular Weight** | 250.33 |

| TEST | SPECIFICATION | LOT 44698PJ RESULTS |
|---|---|---|
| **Appearance (Color)** | Colorless | Colorless |
| **Appearance (Form)** | Liquid | Liquid |
| **Refractive index at 20 °C** | 1.500 - 1.504 | 1.502 |
| **Infrared spectrum** | Conforms to Structure | Conforms |
| **Purity (GC)** | ≥99.0 % | 99.6 % |
| **Color Test** | ≤100 APHA | 10 APHA |
| **Arsenic (As)** | ≤3.0 ppm | < 1.0 ppm |
| **Cadmium (Cd)** | ≤1.0 ppm | < 1.0 ppm |
| **Mercury (Hg)** | ≤1.0 ppm | < 1.0 ppm |
| **Lead (Pb)** | ≤10.0 ppm | < 1.0 ppm |
| **Specification Date:** | | DEC 2008 |
| **Date of QC Release:** | | DEC 2008 |
| **Print Date:** | | DEC 18 2008 |

[redacted] Supervisor
Quality Control
Milwaukee, Wisconsin USA

**APPENDIX 3 Certificate of Analysis – Oxybenzone**

# IVYCHEM

IVY FINE CHEMICALS

http://www.ivychem.com

## CERTICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Product Name** | **2-HYDROXY-4-METHOXYBENZOPHENONE** | | |
| **Synonym** | Oxybenzone | | |
| **Catalog Number** | HH13-026 | | |
| **CAS Number** | 131-57-7 | | |
| **Batch Number** | 20100801 | **Quantity** | 200 KG |
| **Manu. Date** | August 2, 2010 | **Expiry Date** | August 1, 2012 |
| **Date of Report** | August 2, 2010 | **Package** | |
| **Quality Specifications** | Specifications ( In house ) | | |

| Test | Standard | Results |
|---|---|---|
| **Appearance** | Light yellow to green crystalline powder | Light yellow crystalline powder |
| **Assay (HPLC)** | 98% min | 99.92% |
| **Melting Point** | 62 °C to 65 °C | 63.8 °C to 64.8 °C |
| **Loss on Drying** | 0.5% max | 0.07% |
| **Heavy Metals** | <= 5 ppm | 2.9 ppm |
| **Conclusion:** **Conform** | | |

**APPENDIX 3 Certificate of Analysis – Octocrylene**



# Certificate of Analysis

SIGMA-ALDRICH

| | |
|---|---|
| **Product Name** | 2-Ethylhexyl 2-cyano-3,3-diphenylacrylate, 97% |
| **Product Number** | 415820 |
| **Product Brand** | ALDRICH |
| **CAS Number** | 6197-30-4 |
| **Molecular Formula** | $(C_6H_5)_2C=C(CN)CO_2CH_2CH(C_2H_5)(CH_2)_3CH_3$ |
| **Molecular Weight** | 361.48 |

| TEST | SPECIFICATION | LOT 01697MJ RESULTS |
|---|---|---|
| **Appearance (Color)** | Yellow | Yellow |
| **Appearance (Form)** | Viscous Liquid | Viscous Liquid |
| **Infrared spectrum** | Conforms to Structure | Conforms |
| **Purity (GC)** | ≥96.5 % | 99.2 % |
| **Specification Date:** | | OCT 2008 |
| **Date of QC Release:** | | OCT 2008 |
| **Print Date:** | | OCT 22 2008 |

[redacted] Supervisor
Quality Control
Milwaukee, Wisconsin USA

**APPENDIX 3 Certificate of Analysis – Octylmethoxycinnamate**

# CERTIFICATE OF ANALYSIS

**Product 29116** **Octyl 4-methoxycinnamate,98%,stabilized**

**Specifications**

| | |
|---|---|
| Appearance | CLEAR COLOURLESS TO YELLOW LIQUID |
| Infrared spectrometry | AUTHENTIC |
| Separat. techn. GC | >97.5 % |
| Acid value | <1 mg KOH/g |
| Specific abs. A (1%/1cm) | >830 (at 307 to 308 nm in methanol) |
| Specific gravity | (25/25°C) 1.007 to 1.012 |
| Refractive index | 1.5430 to 1.5470 (20°C, 589 nm) |
| Stabilizer | 0.05 to 0.1 % BHT |

**General Product Data**

| | |
|---|---|
| Version | 00 |
| CAS No. | 5466-77-3 |
| Molecular weight | 290.39 |
| Molecular formula | C18 H26 O3 |
| Linear formula | |
| Flash point (°C) | 193 |

**Lot Specific Data for Lot No.: A0293319**

| | |
|---|---|
| Appearance | CLEAR COLOURLESS LIQUID |
| Infrared spectrometry | AUTHENTIC |
| Separat. techn. GC | 99.8 % |
| Acid value | 0.1 mg KOH/g |
| Specific abs. A (1%/1cm) | 865 (at 307 to 308 nm in methanol) |
| Specific gravity | (25/25°C) 1.0096 |
| Refractive index | 1.5453 (20°C, 589 nm) |
| Stabilizer | 0.09 % BHT |

ACROS ORGANICS

[redacted]

Issued: 10-08-10

[redacted] Quality Assurance Manager

Acros Organics Geel West Zone 2, Janssen Pharmaceuticalaan 3a, B-2440 Geel, Belgium Tel +32 14/57.52.11 - Fax +32 14/59.34.34 Internet: http://www.acros.com
1 Reagent Lane, Fair Lawn, NJ 07410,USA Fax 201-796-1329

MR1-N7PATask 1492

A-1

## APPENDIX 3 Certificate of Analysis – MDA-Kb2

ATCC

**Certificate of Analysis**

**ATCC® Number:** CRL-2713™
**Lot Number:** 3984776

**Name:** MDA-kb2
**Description:** Breast Carcinoma
**Species:** Human (*Homo sapiens*)
**Expiration Date:** Not applicable

| Test | Specifications | Results |
|---|---|---|
| **Total cells/mL** | Report results | $5.7 \times 10^6$ |
| **Ampule passage number** | Report results | 37 |
| **Post-freeze viability** | ≥ 50.0% | 89.8% |
| **Growth properties** | Adherent | Adherent |
| **Morphology** | Epithelial-like* and/or rounded | Epithelial-like and rounded |
| **Test for mycoplasma contamination**<br>Hoechst DNA stain (indirect)<br>Agar culture (direct) | <br>None detected<br>None detected | <br>None detected<br>None detected |
| **Species determination: Isoenzyme assay (interspecies)** | Human B (G6PD variant) | Human B (G6PD variant) |
| **Species determination: STR analysis (intraspecies)** | **Human (Unique DNA Profile)**<br>D5S818: 11<br>D13S317: 12<br>D7S820: 10<br>D16S539: 9<br>vWA: 17, 18<br>THO1: 6<br>Amelogenin: X<br>TPOX: 10<br>CSF1PO: 10, 12 | **Human (Unique DNA Profile)**<br>D5S818: 11<br>D13S317: 12<br>D7S820: 10<br>D16S539: 9<br>vWA: 17, 18<br>THO1: 6<br>Amelogenin: X<br>TPOX: 10<br>CSF1PO: 10, 12 |
| **Sterility test (BacT/ALERT 3D)**<br>iAST bottle (aerobic) at 32°C<br>iNST bottle (anaerobic) at 32°C | <br>No growth<br>No growth | <br>No growth<br>No growth |

* Epithelial-like: Any adherent cells of a polygonal shape with clear, sharp boundaries between them.

[redacted]

13 April 2009
Date

Quality Control Manager; Quality, Compliance and Bicsafety

ATCC hereby represents and warrants that the material provided under this certificate has been subjected to the tests and procedures specified and that the results described, along with any other data provided in this certificate, are true and correct to the best of the company's knowledge and belief.

This product is intended to be used for laboratory research use only. It is not intended for use in humans, animals, or for diagnostics.

ATCC products may not be resold, modified for resale, used to provide commercial services, or to manufacture commercial products without prior written agreement from ATCC.

**ATCC (American Type Culture Collection)**
P.O. Box 1549
Manassas, VA 20108 USA
www.atcc.org

800-638-6597 or 703-365-2700
Fax: 703-365-2750
E-mail: tech@atcc.org
or contact your local distributor

**APPENDIX 4 Mycoplasma Free**

bionique Testing Laboratories **CELLshipper®**

Mycoplasma Testing Services
156 Fay Brook Drive • Saranac Lake NY 12983
Phone: 518-891-2356 • Fax: 518-891-5753

***Please enclose this completed form with each slide to avoid delays in processing.***

*Date Sent:* 31Aug2011

*Name:* [redacted]
*(Bionique will submit results only to the person named above)*

*Company/University* CeeTox, Inc.

*Complete Mailing Address: (Results are mailed 1st class USPS)*
4717 Campus Dr.
Kalamazoo, MI 49008

*Optional: FAX #:* _____
*(one Fax # only)*

*Sample Designation or #:* MDA-kb2 Lot: 3184776
P46

*Cell Type:* ✓ *Adherent* ___ *Nonadherent*

*Normal* ___ *Transfect* ___ *Monoclonal* ___ *Tumor* ✓

*Flask* ✓T150 *Roller Bottle* ___ *≤ 2 liter suspension*

*Bioreactor* ___ *Other* _____

**For Research Use Only**

**www.bionique.com**

110236

Date received at Bionique Testing Labs: 9/1/11 Code #: 47660

**M-100 CELLSHIPPER DNA FLUOROCHROME ASSAY RESULTS:**

X **NEGATIVE:** A reaction with staining limited to the nuclear region, which indicates no mycoplasmal contamination.

_____ **POSITIVE:** A significant amount of extranuclear staining which strongly suggests mycoplasmal contamination.

_____ **INCONCLUSIVE:**

_____ A significant amount of extranuclear staining consistent with low - level mycoplasmal contamination or nuclear degeneration.

_____ A significant amount of extranuclear staining consistent with bacterial, fungal or other microbial contaminant or viral CPE. Morphology not consistent for mycoplasmal contamination.

COMMENTS: _____

**Date Processed:** 9/1/11 **By:** [redacted]

Thank you for allowing us to assist you, and for using the CELLshipper. **(dc: 3003 att # 2; 10/9/2003)**

## APPENDIX 5 Protocol and Protocol Amendments

4717 Campus Drive, Kalamazoo, MI 49008 (269) 353-5555 (office) (269) 544-1077 (fax) www.ceetox.com

CeeTox®

*In vitro* models to predict toxicity

**FINAL PROTOCOL**

**Androgenic Transactivation Activity in MDA-kb2 Reporter Cells**

Author

[redacted]

*Study Number:*
*9070-100107ARTA*

Sponsor:
NIEHS
530 Davis Drive, MD K2-12
PO BOX 12233
Durham, NC 27713

Test Facility:
CeeTox
4717 Campus Drive
Kalamazoo, MI 49008

## APPENDIX 5 Protocol and Protocol Amendments



### TEST PROTOCOL

| |
|---|
| **TO BE COMPLETED BY THE STUDY SPONSOR:** |
| **Study Sponsor:** NIEHS/NTP [redacted] Chief Toxicology Branch) |
| **Address:** P.O. Box 12233 |
| **Phone:** [redacted] |
| Research Triangle Park, NC |
| **Study Monitor:** [redacted] |
| **E-mail:** [redacted] |
| **Sponsor Protocol/Project No.:** |
| **Test Substance Name(s): Octyl Salicylate, 2-Ethylhexyl p-methoxycinnamate, 2-Ethylhexyl 2-cyano-3,3-diphenylacrylate, 2-Hydroxy-4-methoxybenzophenone** |

**NIEHS/NTP Investigator**

[redacted]
Telephone No.:
Facsimile No.:
E-mail:

**Contract Office Technical Representative**

[redacted]

(Contract No. HHSN273200900005C; NIEHS Control No. N01-ES-00005)

**Study Monitor**

[redacted] (ILS, Inc, Durham, NC)
Telephone No.:
Facsimile No.:
E-mail:

## APPENDIX 5 Protocol and Protocol Amendments



Table of Contents

## APPENDIX 5 Protocol and Protocol Amendments

## APPENDIX 5 Protocol and Protocol Amendments



Signatures

[redacted]
Study Sponsor
Date 6/24/11

[redacted]
Study Monitor
Date 6/24/11

[redacted]
Date 6/24/2011
Study Director (Director of Project Management)

## APPENDIX 5 Protocol and Protocol Amendments



### Title of Study

Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

### Purpose of Study

The purpose of this study is to analyze test substances for androgenic transactivation activity using the MDA-kb2 reporter cell line. The MDA-kb2 cell line is derived from a human breast cancer line transfected with an androgen receptor promoter linked to a luciferase gene. Consequently, the MDA-kb2 cell line can measure the ability of a test substance to induce or antagonize AR-mediated transactivation via luciferase gene expression.

### Compliance Statement

This study will be conducted in compliance with EPA GLP regulations (Title 40 Part 160) with the exception of section 160.113. Dose concentrations of test and control substances will not be verified using analytical methods.

### Quality Assurance

This study will be subjected to periodic inspections and the draft and final reports will be reviewed by the Quality Assurance Unit of CeeTox in accordance with CeeTox SOP.

### Test Facility

CeeTox, Inc.
4717 Campus Drive
Kalamazoo, MI 49009
USA

## Materials and Methods

### Test Substance

*Test Substance: 2-Hydroxy-4-Methoxybenzophenone (Oxybenzone)*

| | |
|---|---|
| CAS No. | 131-57-7 |
| Source: | Ivy Fine Chemicals Corporation |
| Lot/Batch No.: | 20080801 |
| ILS Repository No.: | 11-29 |
| Formula: | $C_{14}H_{12}O_3$ |
| Description: | Light yellow powder |

## APPENDIX 5 Protocol and Protocol Amendments



| | |
|---|---|
| Storage | Room Temperature |

*Test Substance: 2-Ethylhexyl p-methoxycinnamate (Octylmethoxycinnamate)*

| | |
|---|---|
| CAS No. | 5466-77-3 |
| Source: | Acros Organics |
| Lot/Batch No.: | A0293319 |
| ILS Repository No.: | 11-32 |
| Formula: | $C_{18}H_{26}O_3$ |
| Description: | Clear colorless liquid |
| Storage | Room Temperature |

*Test Substance: Octyl Salicylate (Octylsalate)*

| | |
|---|---|
| CAS No. | 118-60-5 |
| Source: | Sigma-Aldrich |
| Lot/Batch No.: | 44698PJ |
| ILS Repository No.: | 11-30 |
| Formula: | $C_{15}H_{22}O_3$ |
| Description: | Colorless liquid |
| Storage | Room Temperature |

*Test Substance: 2-Ethylhexyl 2-Cyano-3,3-Diphenylacrylate (Octocrylene)*

| | |
|---|---|
| CAS No. | 6197-30-4 |
| Source: | Sigma-Aldrich |
| Lot/Batch No.: | 01697MJ |

## APPENDIX 5 Protocol and Protocol Amendments



ILS Repository No.: 11-31

Formula: $C_{24}H_{27}NO_2$

Description: Yellow viscous liquid

Storage Room Temperature

Preparation of Test Substance

Test substances will be prepared as a stock in DMSO (Dimethylsulfoxide), or appropriate vehicle and serially diluted in the same solvent to prepare solutions for dilutions with media (to a final concentration of ≤ 0.1% (v/v)). Fresh dilutions of the stock solutions will be prepared on the day of use in the assay. Dose concentrations of test and control substances will not be verified using analytical methods.

Positive and Negative Reference Substances

0.5 DMSO: negative control group
DHT (Dihydrotestosterone): CAS No: 521-18-6 (strong agonist)
Nilutamide: CAS No. 63612-50-0 (strong antagonist, no agonism)
p,p'-DDE (1,1-dichloro-2,2-bis(p-chlorophenyl)ethylene) CAS No 82413-20-5: (weak antagonist)

Reference substances will be prepared as a stock in DMSO (final concentration in media of 0.5% (v/v)), or appropriate vehicle and serially diluted in the same solvent to prepare solutions for dilutions with media. Fresh dilutions of the stock solutions will be prepared on the day of use in the assay.

Certificates of analysis will be provided by the vendor and stored in the study data and appended to the study report for the positive and negative reference substances (Table 1).

Note: A certificate of analysis will be provided by the sponsor and will be stored in the study data and appended to the study report. Confirmation of the identity of the test substance, characterization and stability will be verified by the sponsor. For positive, negative reference substances certificates of analysis will be obtained from the vendor and will be stored in the study data and appended to the study report. Test substance will be either returned to the Sponsor or destroyed following finalization of the study report.

**Transactivation Assays**

# APPENDIX 5 Protocol and Protocol Amendments



This test system was designed to identify substances capable of inducing androgen and glucocorticoid-receptor (GR) mediated gene expression (transactivation). Anti-androgen activities will also be evaluated in this model.

The transactivation model utilizes MDA-kb2 cells (derived from human breast cancer cell line, MDA-MB-453) transfected with an AR promoter linked to a luciferase gene (Wilson, *et al.* 2002). The cell line was obtained from ATCC. Cell culture medium and cell culture reagents are purchased from Hyclone and Gibco (Invitrogen).

## Androgen Transactivation Assay Test System

The ability of unknown substances to induce an AR-dependent response in a cell system will be determined using an MDA-kb2 human breast carcinoma cell line constructed with a luciferase reporter gene for the androgen response element (ARE). The MDA-kb2 cell line was derived from the breast cancer cell line, MDA-MB-453 by stable transfection with a mouse mammary tumor virus (MMTV) luciferase-neo reporter gene construct (Wilson *et al.*, 2002). The MDA-MB-453 parent cell line has been shown to express high levels of functional, endogenous androgen receptor (AR). However estrogen receptor alpha, and progesterone receptor are not detectable at the mRNA level and estrogen receptor beta is expressed only at very low levels. This cell line does contain glucocorticoid receptor (GR).

MDA-kb2 cell line will be tested and determined to be mycoplasm free prior to testing sponsor's substances in the transactivation assays. Cells will be initially grown in Leibovitz's L-15 medium containing 10% fetal bovine serum without antibiotics at approximately 37°C and without $CO_2$. The doubling time for these cells is approximately 40-48 hr.

MDA-kb2 cells will be seeded into opaque sided 96-well cell culture plates at a density of approximately 10,000 cells/well in the medium described above. The cells will be then grown for approximately 24 hrs prior to the addition of the test substances.

Each test substance will be prepared for addition to the cell system by making a 400 mM stock. Dilutions will be prepared in DMSO to 400X final target concentration. 10 µl aliquots of the substance dilutions will be added to 2 mL media in deep well plates and mixed to yield concentrations of test material 2-fold greater than the desired final concentration. To achieve the final exposure concentrations each 2X solution will be diluted 2-fold in another 96-well plate containing the cells and 50 mL media and appropriate controls.

Once completed each plate will be returned to the incubator and incubated for approximately 24 hours at approximately 37°C without $CO_2$. Each test substance exposure concentration will be in replicates of six. Several control groups will be included o in each set of plates (agonist or antagonist) as follows: vehicle control (0.5% DMSO), maximal response agonist control (dihydrotestosterone; DHT, CAS No 521-18-6), antagonist (nilutamide, CAS No

63612-50-0) only control, and antagonist (nilutamide) or agonist (DHT) at each exposure concentration. In all situations the amount of stock solution solvent (DMSO) will be held constant at 0.5%.

Antagonism experiment plates will be co-exposed to a near maximal induction producing concentration of agonist, dihydrotestosterone (1 nM DHT) with vehicle or test substance. In the presence of an antagonist, the luciferase activity induced by DHT would be reduced proportionally to the concentration of the antagonist. The well-characterized antagonist, nilutamide will be run as a positive control. Concentrations of test substances with cytotoxicity below 80% will be eliminated from the analysis.

## Reference

Wilson, VS., Bobseine, K., Lambright, CR., and Gray, LE., Jr. (2002). A novel cell line, MDA-kb2, which stably expresses an androgen and glucocorticoid-responsive reporter for detection of hormone receptor agonists and antagonists. *Toxicol. Sci.* **66**, 69-81.

## Calculations for Transactivation Data

Luminescence will be measured with a luminescence counter. These data will be transferred to Microsoft Excel© worksheets for determination of standard statistical parameters such as the Mean, Standard Deviation, Standard Error of the Mean, and Coefficient of Variation. At this point the mean values of response will be reviewed for outlier values. All processed data will be examined to determine if negative and positive induction controls within each plate are within acceptable limits. The acceptance criteria used will be as follows: Background value ratio of vehicle control to antagonist control should be less than 10-fold, and the ratio of positive control to vehicle control should be greater than 3-fold. Each data point will be normalized to the average of the vehicle-only treated control (fold induction). The final Fold Induction results will be transferred into GraphPad Prism version 5.01 or xlfit as individual data points in plate block format.

Test substances will be considered positive for agonism and or antagonism based upon two (or three) independent runs. If two runs give comparable and therefore reproducible results, it will not be necessary to conduct a third run. Data interpretation criteria are shown in the table below for agonism.

Agonism Positive and Negative Decision Criteria

| | |
|---|---|
| Positive | If the $RPC_{Max}$ obtained is equal to or exceeds 20% of the positive control (DHT) in at least two of two runs |
| Negative | If the $RPC_{Max}$ fails to achieve at least 20% of the response of the positive control in two of two or two of three runs |

Antagonism Positive and Negative Decision Criteria

| | |
|---|---|
| Positive | If the differential between the high antagonism and low antagonism are greater than 50% and have a dose response (more than one data point) in two of two runs. |
| Negative | If the differential fails to achieve at least 50% difference and does not have a dose response, in two of two runs. |

**Cytotoxicity Assay**

Cell viability will be monitored by Propidium Iodide (PI) uptake. PI is a dye that cannot cross the plasma membrane of intact and viable cells. Cells that are dead or dying have weakened plasma membrane which allows PI to enter the cytosol of the damaged cells. Once inside the cell the PI intercalates into DNA/RNA and yields a fluorescent signal. Fluorescence is directly proportional to cell viability. PI is a light sensitive substance; therefore all procedures will be conducted under low light conditions.

Cells will be seeded into a 96-well black sided culture plate at the same time cells are seeded for the AR transactivation assays as described above (i.e. vehicle control (0.5% DMSO), maximal response agonist control (dihydrotestosterone; DHT, CAS No 521-18-6), nilutamide, CAS No 63612-50-0) only control, and antagonist (nilutamide) or agonist (DHT) at each exposure concentration. PI assays will be performed on the test substance alone and additionally on the test substance in the presence of DHT for all concentrations examined in the transactivation assays (see above). In all situations the amount of stock solution solvent (DMSO) will be held constant at 0.5%. The PI working solution will be prepared by adding PI powder to phosphate buffered saline (PBS) for a final concentration of 4.4 $\mu$M. Following approximately 24 hr incubation with the test substances the growth medium will be removed from the plate and 50 $\mu$l of the PBS/PI solution will be added. The plate will be maintained under low light conditions. Background fluorescence will be evaluated by reading fluorescence following a minimum of 5 minutes on a fluorescent plate reader at an excitation wavelength of 544 nm and an emission wavelength of 612 nm. Following this determination, 50 $\mu$l of a 2% triton 100-X solution prepared in water will be added and the plate will be incubated at room temperature for a minimum of 15 minutes and read at the same wavelengths. The total amount of fluorescence or cells present on the plate will be determined by subtracting the first read from the second read. The change in cell viability will be determined by comparing treated wells to the untreated or control wells. A 20% drop below vehicle treated controls will be considered cytotoxic.

**Solubility/Precipitation Assay**

The limit of solubility will be determined by a light scattering procedure that uses Nephelometry (Nepheloskan Ascent by Labsytems). A plate (without cells) will be prepared that contains 200 $\mu$l of the growth medium and the test substance at all exposure concentrations being evaluated. Nephelometry measures particulate light scattering. If a substance produces a consistent signal $\geq$ 3 times the vehicle control signal, that concentration will be considered to have precipitation.

## APPENDIX 5 Protocol and Protocol Amendments



This technique is an effective means of determining changes in the cell culture and dosing matrices. However, it should be noted that changes in fluid turbidity can be affected by the test substance reaching saturation and precipitating out of the solution or by the substance causing the precipitation of components in the culture and dosing media such as protein or salts. In situations where the transactivation response continues to increase with increasing exposure concentrations or receptor binding curves respond as expected beyond the apparent solubility, it is likely that the reason for the change in apparent solubility was due to matrix component precipitation and not test substance precipitation.

### Acceptance Criteria

Stability of the cell line will be monitored by using DHT as the agonist reference control and Nilutamide as the strong positive antagonist control. Nonylphenol will be used as a mild reference control for antagonism. A complete concentration range for each reference control will be run every time the AR transactivation assay is performed.

Background Criteria: The mean of the vehicle control wells (VC) divided by average background wells must be less than 20.

Fold induction: The target mean luciferase activity of the positive control (10 nM DHT) will be at least 3 fold that of the mean vehicle control on each plate.

### Study Reports

The data to be reported in the draft final report and final report will include (but will not be limited to) the following information: assay date and run number, laboratory personnel involved in the study, chemical/test substance information (including but not limited to chemical name, code, molecular weight, concentrations tested, notes regarding solubility).

### Alterations of the Study Design

Alterations of this protocol may be made as the study progresses. No changes in the protocol will be made without the specific written request or consent of the Sponsor. In the event that the Sponsor authorizes a protocol change verbally, CeeTox will honor such a change. However, written authorization will be obtained thereafter. All protocol amendments and justifications will be documented, signed and dated by the Study Director, Study Monitor and Sponsor and added to the report. A copy of this protocol and all amendments will be issued to the Sponsor as well as CeeTox and placed into the study binder.

## APPENDIX 5 Protocol and Protocol Amendments



### Data Retention and Archiving

All raw data, documentation, records, protocol, and the final report generated as a result of this study will be retained at CeeTox for 15 years. Retention of the materials after 15 years will be subjected to a future contractual agreement between the Sponsor and CeeTox.

### Study Records to be maintained:

All records that document the conduct of the laboratory experiments and results obtained, as well as the equipment and chemicals used.
Protocol and any Amendments
List of any Protocol Deviations

CeeTox

**Protocol Amendment**

**Study Number:** 9070-100107ARTA

**Title of Study to be Amended:** Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

**Reason for Amendment to Protocol:** Current Study Director's work load and number of studies directing has reached a maximal capacity deemed acceptable by test facility management.

**Change:** [redacted] will be designated the Study Director for this study.

**Signature**

**CeeTox, Inc.**

[redacted] _____ 06 Oct 2011
Study Director (Project Manager) Date

[redacted] _____ 06 OCT 2011
President Date

## APPENDIX 5 Protocol and Protocol Amendments

**Protocol Amendment**

**Study Number:** 9070-100107ARTA

**Title of Study to be Amended:** Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

**Reason for Amendment to Protocol:** A typograpical error was found in the protocol.

**Change:**

The CAS number for p,p'DDE was listed in the protocol as 82413-20-5.

The CAS number for p,p'DDE will now be listed in the protocol as 72-55-9.

**Signature**

**CeeTox, Inc.**

[redacted]

Study Director (Project Manager)

31 Oct 2011
Date

## APPENDIX 5 Protocol and Protocol Amendments

CeeTox

**Protocol Amendment**

**Study Number:** 9070-100107ARTA

**Title of Study to be Amended:** Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

**Reason for Amendment to Protocol:** The Two-Read Propidium Iodide SOP has been revised and the protocol is being amended to reflect these changes. A typo was identified in both CeeTox SOP and the protocol which stated the final concentration of propidium iodide was 4.4 µM. The correct concentration, and the concentration prepared and used in the study, was 44 µM.

**Change:**
The section titled Cytotoxicity Assay, Paragraph 2, the sentence 4 stated:

"The PI working solution will be prepared by adding PI powder to phosphate buffered saline (PBS) for a final concentration of 4.4 µM."

The section titled Cytotoxicity Assay, Paragraph 2, the sentence 4 will now state:

"The PI working solution will be prepared by adding PI powder to phosphate buffered saline (PBS) for a final concentration of 44 µM."

**Signature**

**CeeTox, Inc.**

[redacted]
Study Director (Project Manager)

31-Oct-2011
Date

## APPENDIX 5 Protocol and Protocol Amendments

CeeTox

**Protocol Amendment**

**Study Number:** 9070-100107ARTA

**Title of Study to be Amended:** Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

**Reason for Amendment to Protocol:** Client requested amendment

**Change:**
Section Data Retention and Archiving will now state:

At the study closure, all study records including all original raw data and original final report, will be shipped to the sponsor at the following address:

NTP Archives
[redacted]
615 Davis Drive, Suite 300
Durham, NC 27713

**Signature**

**CeeTox, Inc.**

[redacted]
Study Monitor

12-6-11
Date

[redacted]
Study Director (Project Manager)

6 Dec 2011
Date

## APPENDIX 5 Protocol and Protocol Amendments

CeeTox

**Protocol Amendment**

**Study Number:** 9070-100107ARTA

**Title of Study to be Amended:** Androgenic Transactivation Activity in MDA-kb2 Reporter Cells

**Reason for Amendment to Protocol:** The Table of Contents had typographical errors.

**Change:**

The Table of Contents will now read:



**Signature**

[redacted]
Study Monitor

1/24/12
Date

[redacted]
Study Director (Project Manager)

25 Jan 2012
Date