Anticonvulsant Screening Program

Test 76 Results - In-vitro Hippocampal Slice Culture Neuroprotection Assay (NP)

ASP ID: 145016 A Screen ID: 1

Solvent Code: DMSO **Solvent Prep:**

Test Date: 05-May-2010

Reference: 450:162,166,173

Summary of NP Assay: NMDA

- **Test Result:** Neuroprotective effect

Response

Excitotoxin: NMDA

ASP Compound Conc.(uM)	# of slices	% of Total Propidium Iodide Uptake (mean +/- S.E.M)	
0	14	51.8 +/- 3.4	☐
10	6	60.0 +/- 2.8	☐
30	8	36.5 +/- 4.8	☑
60	8	4.6 +/- 0.2	☑
100	7	6.5 +/- 0.3	☑

Note: box is checked if data is significantly different from excitotoxin treatment alone, p<0.05.

IC50(uM): 36.70 +/- 1.07 S.E. M

Comments:

TEST 76: *in vitro* HIPPOCAMPAL SLICE CULTURE NEUROPROTECTION ASSAY

Compound 1 : ADD Number: 145016 **Batch:** A **Date Started:** 05-May-2010

Compound 2 : ADD Number: **Batch:** **Date Completed:** 21-May-2010

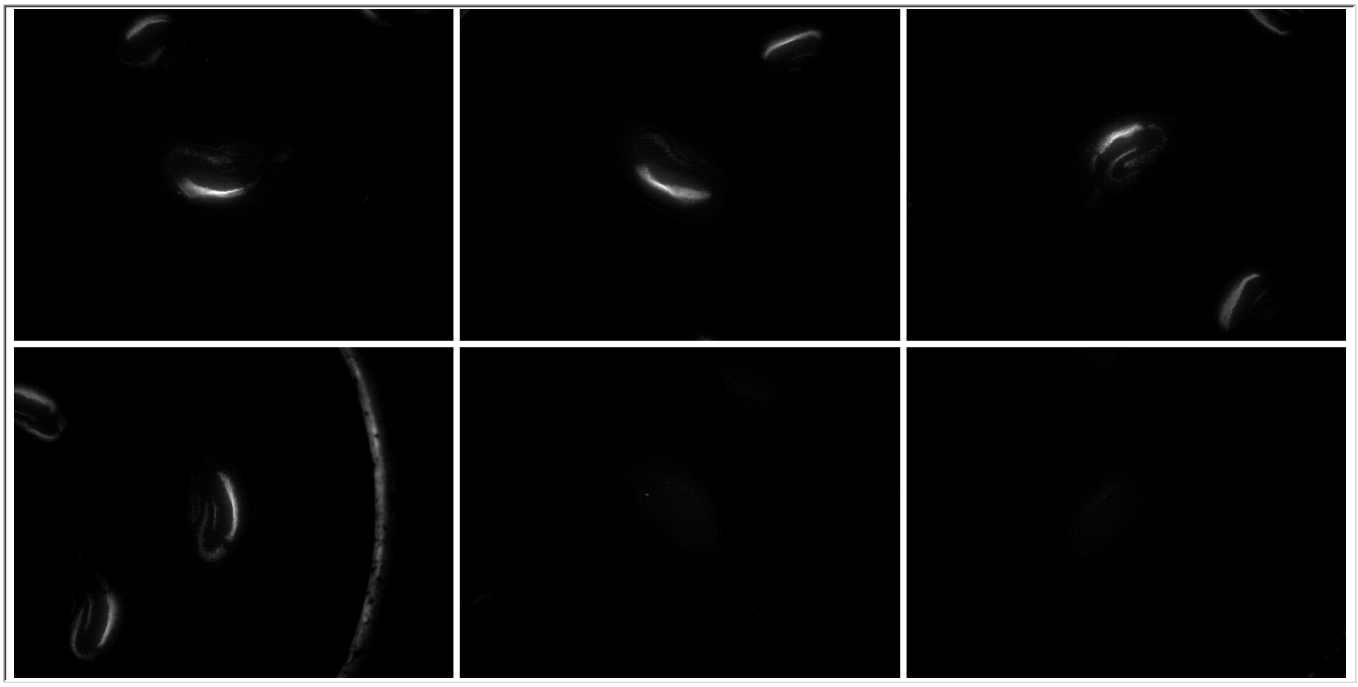
References: 450: 162, 166, 173

Excitotoxin: NMDA **Insult Duration:** 4 Hours **Solvent:** DMSO

Primary Screen Results: Neuroprotection observed

EXPERIMENT IMAGES & WELL DESCRIPTION

A1	NMDA 10μM	**A2**	NMDA 10μM + 145016 10μM	**A3**	NMDA 10μM + 145016 10μM



B1	NMDA 10μM	**B2**	NMDA 10μM + 145016 100μM	**B3**	NMDA 10μM + 145016 100μM

PRIMARY SCREEN EXPERIMENT DESCRIPTION

The "Primary Screen Experiment" is a qualitative assessment of the ability of a compound to prevent excitotoxic cell death. Organotypic hippocampal slice cultures are treated with N-methyl-D-aspartate (NMDA) or kainic acid (KA) to induce neuronal cell death. Propidium iodide (PI), a membrane-impermeant compound, is included in all wells of the culture plate. Dying cells have compromised cell membranes, thus PI may diffuse into the cell, intercalate with DNA and fluoresce. Thus, the intensity of the PI fluorescence is proportional to the amount of cell death in the individual slices. Hippocampal slice cultures are treated with the excitotoxin alone, or where indicated above, with the excitotoxin and either **one or two** investigational compounds at the concentrations indicated. If neuroprotection occurs as a consequence of the added compound, slice cultures will have a visibly reduced fluorescent intensity when compared to the slice cultures that have been treated with the excitotoxin alone.

Anticonvulsant Screening Program

Test 76 Results - In-vitro Hippocampal Slice Culture Neuroprotection Assay (NP)

ASP ID: 145016 A Screen ID: 2

Solvent Code: DMSO **Solvent Prep:**

Test Date: 05-May-2010

Reference: 450:162,166

Summary of NP Assay: Kainic acid

- **Test Result:** No Neuroprotection

Comments:

TEST 76: *in vitro* HIPPOCAMPAL SLICE CULTURE NEUROPROTECTION ASSAY

Compound 1 : **ADD Number:** 145016 **Batch:** A **Date Started:** 05-May-2010

Compound 2 : **ADD Number:** **Batch:** **Date Completed:** 14-May-2010

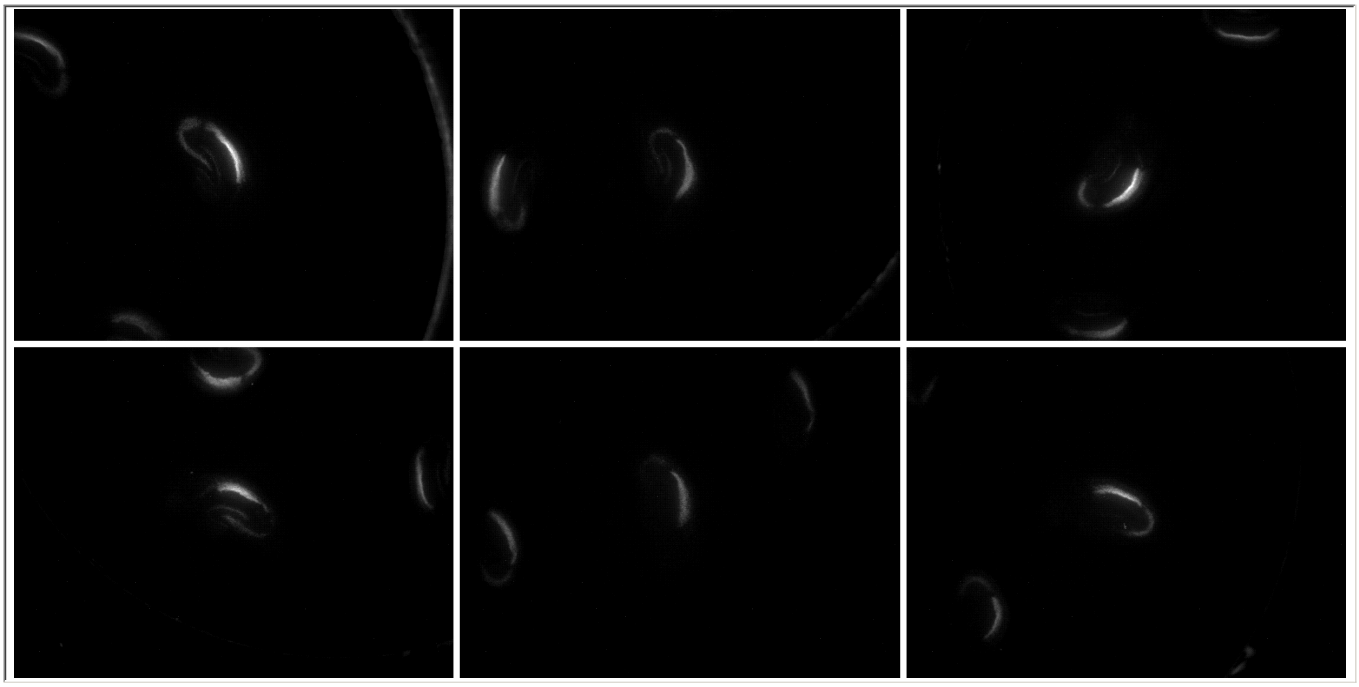
References: 450: 162, 166

Excitotoxin: Kainic Acid **Insult Duration:** 4 Hours **Solvent:** DMSO

Primary Screen Results: **No neuroprotection observed**

EXPERIMENT IMAGES & WELL DESCRIPTION

A1	KA 20µM	**A2**	KA 20µM + 145016 10µM	**A3**	KA 20µM + 145016 10µM



B1	KA 20µM	**B2**	KA 20µM + 145016 100µM	**B3**	KA 20µM + 145016 100µM

PRIMARY SCREEN EXPERIMENT DESCRIPTION

The "Primary Screen Experiment" is a qualitative assessment of the ability of a compound to prevent excitotoxic cell death. Organotypic hippocampal slice cultures are treated with N-methyl-D-aspartate (NMDA) or kainic acid (KA) to induce neuronal cell death. Propidium iodide (PI), a membrane-impermeant compound, is included in all wells of the culture plate. Dying cells have compromised cell membranes, thus PI may diffuse into the cell, intercalate with DNA and fluoresce. Thus, the intensity of the PI fluorescence is proportional to the amount of cell death in the individual slices. Hippocampal slice cultures are treated with the excitotoxin alone, or where indicated above, with the excitotoxin and either **one or two** investigational compounds at the concentrations indicated. If neuroprotection occurs as a consequence of the added compound, slice cultures will have a visibly reduced fluorescent intensity when compared to the slice cultures that have been treated with the excitotoxin alone.