

Anticonvulsant Screening Program

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

ASP ID: 407065 U Screen ID: 1

Solvent Code: DMSO Solvent Prep:

Test Date: 09-Sep-2009

Reference: 439:193,205,208,215,216,228

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	21	44.6 +/- 2.6	☐
0.1	8	54.2 +/- 2.9	☐
1	8	48.6 +/- 5.4	☐
3	8	29.7 +/- 6.2	☒
10	8	8.7 +/- 1.6	☒
30	8	7.0 +/- 0.5	☒
100	8	8.1 +/- 0.5	☒

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

IC50(uM): 2.87 +/- 1.18 S.E. M

Comments:

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

Compound 1 : ADD Number: 407065

Batch: U

Date Started: 09-Sep-2009

Compound 2 : ADD Number:

Batch:

Date Completed: 23-Oct-2009

References: 439: 193, 205, 208, 215, 216, 228

Excitotoxin: NMDA

Insult Duration: 4 Hours

Solvent: DMSO

Primary Screen Results: Neuroprotection observed

EXPERIMENT IMAGES & WELL DESCRIPTION

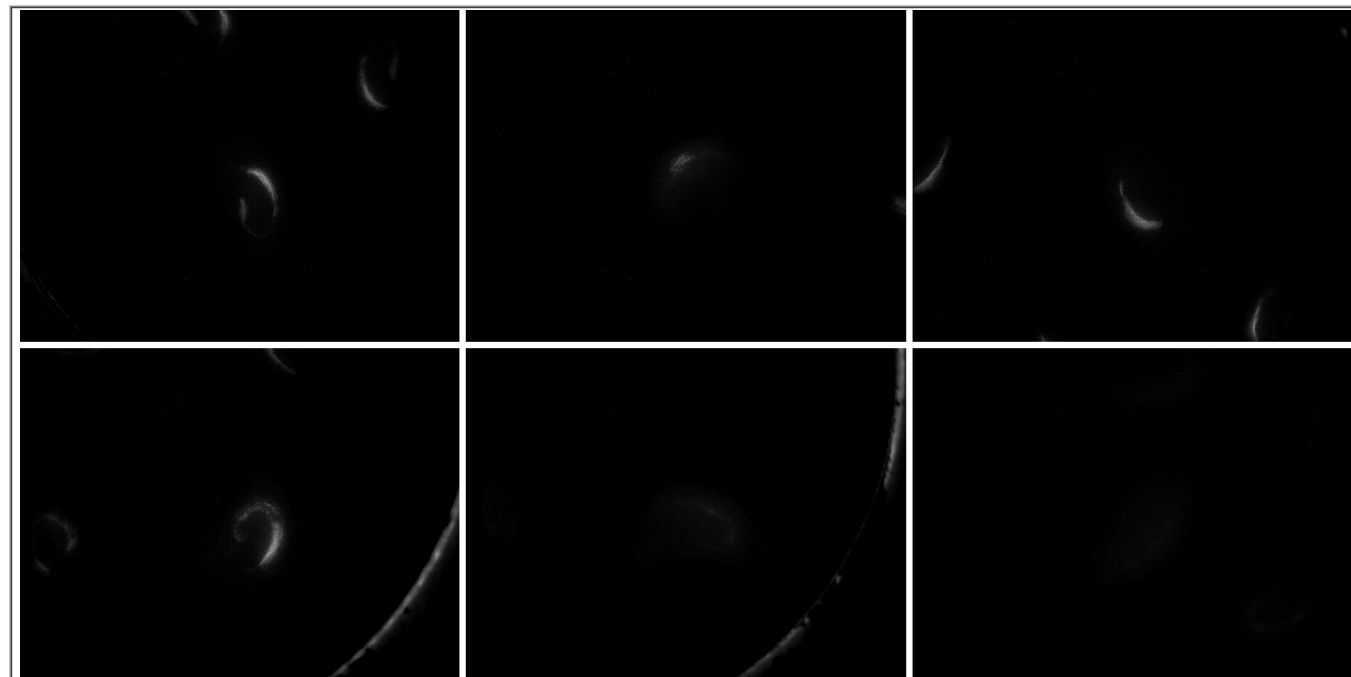
A1 NMDA 10 μ M

A2 NMDA 10 μ M +

A3 NMDA 10 μ M +

407065 3 μ M

407065 3 μ M



B1 NMDA 10 μ M

B2 NMDA 10 μ M +

B3 NMDA 10 μ M +

407065 30 μ M

407065 30 μ M

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: 407065 U Screen ID: 2

Solvent Code: DMSO Solvent Prep:

Test Date: 09-Sep-2009

Reference: 439:193

Summary of NP Assay: Kainic acid

- Test Result: No Neuroprotection
- ADD compounds evaluated: 407065 407011

Note: This experiment is run at two different concentrations of candidate drug against a fixed concentration of excitotoxin. If multiple candidates from the same participant source are scheduled for NP screening we will test compounds in pairs whenever possible.

Comments:

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

Compound 1 : ADD Number: 407011

Batch: U

Date Started: 09-Sep-2009

Compound 2 : ADD Number: 407065

Batch: U

Date Completed: 11-Sep-2009

References: 439: 193

Excitotoxin: Kainic Acid

Insult Duration: 4 Hours

Solvent: DMSO

Primary Screen Results: No neuroprotection observed

EXPERIMENT IMAGES & WELL DESCRIPTION

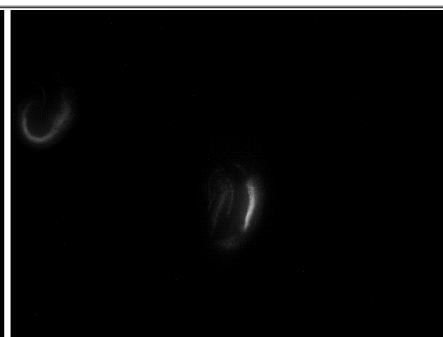
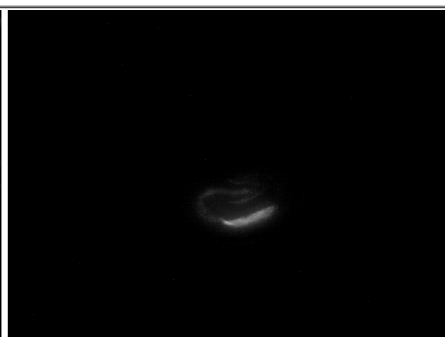
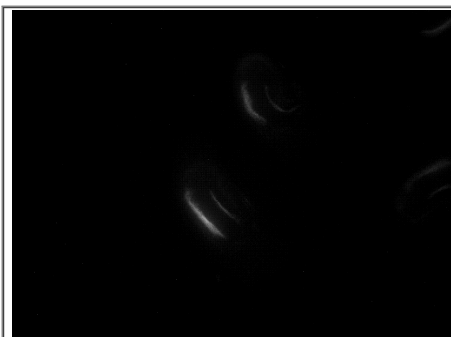
A1 KA 20µM

A2 KA 20µM +

A3 KA 20µM +

407011 10µM+407065 10µM

407011 10µM+407065 10µM



B1 KA 20µM

B2 KA 20µM +

B3 KA 20µM +

407011 100µM+407065 100µM

407011 100µM+407065 100µM

PRIMARY SCREEN EXPERIMENT DESCRIPTION

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