NEUROMICS

Sodium Valproate Data Sheet

Catalog Number:	MC11025	**Product Type:**	Small Molecule
Bio-Activity:	HDAC inhibitor	**CAS #:**	1069-66-5
Research Categories:	Neuroscience, stem cells, cell death, epigenetics	**Chemical Name:**	2-Propylpentanoic acid Na
Solubility:	Soluble in Water (up to 50 mg/ml).	**Molecular Formula:**	C8H15O2 Na
Purity:	> 98%	**Molecular Weight:**	166.20
Format:	Powder	**Ship Temp:**	Ambient
Storage:	-20°C		

Application Notes

Description/Data:
Sodium valproate is a histone deacetylase inhibitor (IC50 = 400µM) (1) that has demonstrated neuroprotective, anticancer, and anti-inflammatory activity (2). It stops Aβ production, reduces neuritic plaque formation, and improves memory deficits in Alzheimer's mouse models (3). Sodium valproate also improves stem cell reprogramming efficiency and enables efficient induction of pluripotency without introduction of the oncogene c-Myc (4).

References:

1) Phiel et al. (2001), Histone deacetylase is a direct target of valproic acid, a potent anticonvulsant, mood stabilizer, and teratogen; *J. Biol. Chem.* 276 36734

2) Kim et al. (2007), Histone deacetylase inhibitors exhibit anti-inflammatory and neuroprotective effects in a rat permanent ischemic model of stroke: multiple mechanisms of action; *J. Pharmacol. Exp. Ther.* 321 892

3) Qing et al. (2008), Valproic acid inhibits Abeta production, neuritic plaque formation, and behavioral deficits in Alzheimer's mouse models; *J. Exp. Med.* 205 2781

4) Hangfu et al. (2008), Induction of pluripotent stem cells by defined factors is greatly improved by small molecule compounds; *Nat. Biotechnol.* 26 795

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