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DATASHEET

Valproic acid sodium salt

Product overview

Name	Valproic acid sodium salt
Cat No	HB0867
Alternative names	VPA
Biological action	Inhibitor
Description	Histone deacetylase inhibitor. Shows multitude of biological actions. Enables pluripotent stem cell induction from somatic cells.

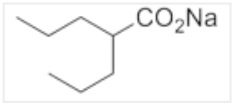
Biological Data

Biological description	Histone deacetylase inhibitor (IC_{50} = 400 µM at HDAC1). Shows multitude of biological actions. Can be used to produce pluripotent stem cells (iPS cells) with only Oct4 and Sox2 factors required in addition. Activates Wnt-dependent gene expression and shows anti-inflammatory, anti-cancer anti-epileptic and neuroprotective actions. Blood-brain barrier permeable.

Solubility & Handling

Storage instructions	room temperature (desiccate)
Solubility overview	Soluble in water (100mM) or DMSO (50mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	Sodium 2-propylpentanoate
Molecular Weight	166.19
Chemical structure	
Molecular Formula	$C_8H_{15}NaO_2$
CAS Number	1069-66-5
PubChem identifier	16760703
SMILES	[Na+].CCCC(CCC)C([O-])=O
InChiKey	AEQFSUDEHCCHBT-UHFFFAOYSA-M

References

Histone deacetylase is a direct target of valproic acid, a potent anticonvulsant, mood stabilizer, and teratogen.

Phiel CJ *et al* (2001) J Biol Chem 276(39)
PubMedID 11473107

Valproic acid inhibits Abeta production, neuritic plaque formation, and behavioral deficits in Alzheimer's disease mouse models.

Qing H *et al* (2008) J Exp Med 205(12)
PubMedID 18955571

Potentiation of anticancer effect of valproic acid, an antiepileptic agent with histone deacetylase inhibitory activity, by the cyclin-dependent kinase inhibitor P276-00 in human non-small-cell lung cancer cell lines.

Shirsath N *et al* (2013) Lung Cancer 82(2)
PubMedID 24051085

Induction of pluripotent stem cells from primary human fibroblasts with only Oct4 and Sox2.

Huangfu D *et al* (2008) Nat Biotechnol 26(11)
PubMedID 18849973