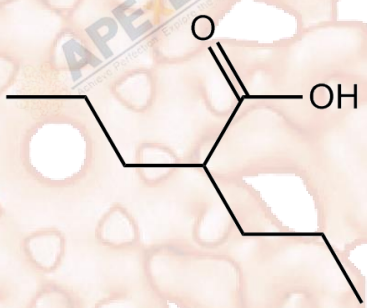
Valproic acid



Cat. No.: B1251
CAS No.: 99-66-1
Formula: C8H16O2
M.Wt: 144.21
Synonyms:
Target: DNA Damage/DNA Repair
Pathway: HDAC
Storage: Store at -20°C;Colorless liquid

Solvent & Solubility

In Vitro

⩾12.35 mg/mL in DMSO; ⩾29 mg/mL in EtOH; ⩾36 mg/mL in H2O

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	6.9343 mL	34.6717 mL	69.3433 mL
5 mM	1.3869 mL	6.9343 mL	13.8687 mL
10 mM	0.6934 mL	3.4672 mL	6.9343 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	HDAC1 inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Neuro2A cells, human ovarian cancer cell line SKOV3
Preparation method:	Soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	0.5–5 mM for 24 h; or 4 mM for 48 h

	Applications:	Valproic acid induced hyperacetylation of endogenous histones and inhibited nuclear HDAC activity in Neuro2A cells. Moreover, valproic acid inhibited cell proliferation, and induced apoptosis of SKOV3 cells in a dose- and time-dependent manner.
In Vivo	**Animal experiment**	
	Animal models:	human ovarian cancer model transplanted subcutaneously in nude mice
	Dosage form:	500mg/kg/day, intraperitoneal injection, for 30 days
	Applications:	Valproic acid induced growth inhibition of human ovarian cancer transplanted subcutaneously in nude mice. Moreover, valproic acid (50 mg/kg, IV infusion) decreased pro-inflammatory cytokine gene expression in a canine endotoxemia model in vivo.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

1. Phiel, C. J., Zhang, F., Huang, E. Y., Guenther, M. G., Lazar, M. A. and Klein, P. S. (2001) Histone deacetylase is a direct target of valproic acid, a potent anticonvulsant, mood stabilizer, and teratogen. J Biol Chem. 276, 36734-36741

2. Shan, Z., Feng-Nian, R., Jie, G. and Ting, Z. (2012) Effects of valproic acid on proliferation, apoptosis, angiogenesis and metastasis of ovarian cancer in vitro and in vivo. Asian Pac J Cancer Prev. 13, 3977-3982

3. Song, R., Yu, D., Yoon, J. and Park, J. (2015) Valproic acid attenuates the expression of pro-inflammatory cytokines lipopolysaccharide-treated canine peripheral blood mononuclear cells (in vitro) and in a canine endotoxemia model (in vivo). Vet Immunol Immunopathol. 166, 132-137

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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