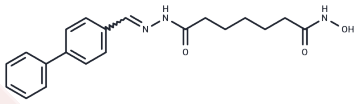
Data Sheet (Cat.No.T27083)

TargetMol

Crebinostat

Chemical Properties



CAS No. : 1092061-61-4

Formula: C20H23N3O3

Molecular Weight: 353.41

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Crebinostat is a potent histone deacetylase (HDAC) inhibitor, targeting HDAC1, HDAC2, HDAC3, and HDAC6 with IC50s of 0.7 nM, 1.0 nM, 2.0 nM, and 9.3 nM, respectively. It increases the density of synapsin-1 punctae along dendrites in neurons in vitro, modulates chromatin-mediated neuroplasticity, and enhances memory in mice. Additionally, Crebinostat induces histone H3 and H4 acetylation and enhances the expression of Egr1, a cAMP-responsive element binding protein (CREB) target gene.
Targets(IC50)	Epigenetic Reader Domain,Histone Acetyltransferase,HDAC
In vitro	Crebinostat (1 μM; 24 h) induces acetylation of AcH4K12 and AcH3K9 in mouse primary neuronal cells, with EC50 values of 0.29 μM and 0.18 μM, respectively. It downregulates Mapt mRNA expression and upregulates Hspa1b (Hsp70) and Bdnf mRNA expression, while increasing histone acetylation and synapsin I punctae along dendrites in primary cultured neurons.[1]
In vivo	Crebinostat (25 mg/kg; i.p.; for 10 days; Male C57BL/6J mice) boosts memory in mice during contextual fear conditioning and leads to a rise in overall hippocampal acetylation of H4K12 and H3K9.[1]

Solubility Information

Solubility	DMSO: 0.88 mg/mL (2.49 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.83 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8296 mL	14.1479 mL	28.2957 mL
5 mM	0.5659 mL	2.8296 mL	5.6591 mL
10 mM	0.283 mL	1.4148 mL	2.8296 mL
50 mM	0.0566 mL	0.283 mL	0.5659 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Fass DM, et al. Crebinostat: a novel cognitive enhancer that inhibits histone deacetylase activity and modulates chromatin-mediated neuroplasticity. Neuropharmacology. 2013;64:81-96.
Ghosh B, et al. Dissecting structure-activity-relationships of crebinostat: Brain penetrant HDAC inhibitors for neuroepigenetic regulation. Bioorg Med Chem Lett. 2016;26(4):1265-1271.