

Martinostat hydrochloride

Chemical Properties

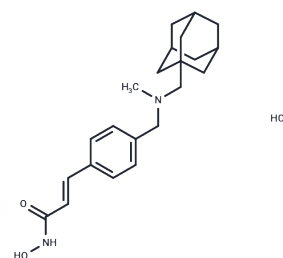
CAS No. :

Formula: C₂₂H₃₁ClN₂O₂

Molecular Weight: 390.95

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	Martinostat hydrochloride is a potent and selective histone deacetylase (HDAC) inhibitor with nanomolar affinity toward Class I HDACs (HDAC1, HDAC2, HDAC3) and the Class IIb isoform HDAC6, exerting its pharmacological effects by blocking enzymatic deacetylation and consequently increasing global histone and non-histone protein acetylation, thereby modulating transcriptional programs and disrupting key survival pathways in pathological cells; Martinostat demonstrates exceptional brain penetrance compared with other hydroxamate HDAC inhibitors, enabling high-quality neuroepigenetic PET imaging with [11C]-labeled tracers to characterize altered HDAC availability in neurodegenerative disorders such as Alzheimer's disease, while oncology studies show that Martinostat suppresses proliferation, induces apoptosis, and enhances the activity of tyrosine kinase inhibitors in both imatinib-sensitive and imatinib-resistant chronic myeloid leukemia models, highlighting its therapeutic potential for overcoming drug resistance.
Targets(IC50)	HDAC

Solubility Information

Solubility	DMSO: 100 mg/mL (255.79 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5579 mL	12.7894 mL	25.5787 mL
5 mM	0.5116 mL	2.5579 mL	5.1157 mL
10 mM	0.2558 mL	1.2789 mL	2.5579 mL
50 mM	0.0512 mL	0.2558 mL	0.5116 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

Changning Wang, et al. In Vivo Imaging of Histone Deacetylases (HDACs) in the Central Nervous System and Major Peripheral Organs. *J Med Chem.* 2014 Oct 9;57(19):7999-8009.

Tharick A Pascoal, et al. [11C]Martinostat PET analysis reveals reduced HDAC I availability in Alzheimer's disease. *Nat Commun.* 2022 Jul 19;13(1):4171.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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