

Methylstat

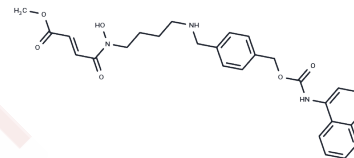
Chemical Properties

CAS No. : 1310877-95-2

Formula: C₂₈H₃₁N₃O₆

Molecular Weight: 505.56

Storage: Store at low temperature, Keep away from direct sunlight
 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	Methylstat is a methyl ester prodrug of a Jumonji C domain-containing histone demethylase (JMJD) inhibitor that has favorable cell permeability. The free acid of methylstat inhibits JMJD2A, JMJD2C, JMJD2E, PHF8, and JMJD3 with IC ₅₀ values of approximately 4.3, 3.4, 5.9, 10, and 43 μM, respectively, in an in vitro assay. Methylstat inhibits growth of the JMJD2C-sensitive esophageal cancer cell line KYSE150 with a GI ₅₀ of 5.1 μM, whereas the free acid of methylstat did not inhibit cell growth up to 100 μM. Methylstat induces histone hypermethylation at multiple sites in a concentration-dependent manner (EC ₅₀ for H3K4me ₃ and H3K9me ₃ = 10.3 and 8.6 μM in KYSE150 cells and 6.7 and 6.3 μM in MCF-7 cells, respectively).
Targets(IC ₅₀)	Apoptosis, Histone Demethylase, MDM-2/p53

Solubility Information

Solubility	DMSO: 25 mg/mL (49.45 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: 2 mg/mL (3.96 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.978 mL	9.890 mL	19.780 mL
5 mM	0.3956 mL	1.978 mL	3.956 mL
10 mM	0.1978 mL	0.989 mL	1.978 mL
50 mM	0.0396 mL	0.1978 mL	0.3956 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

Luo, X., et al. A selective inhibitor and probe of the cellular functions of Jumonji C domain-containing histone demethylases. *Journal of the American Chemical Society* 133(24), 9451-9456 (2011).

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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