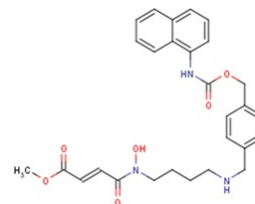


## Methylstat

## Chemical Properties

CAS No.:	1310877-95-2
Formula:	C <sub>28</sub> H <sub>31</sub> N <sub>3</sub> O <sub>6</sub>
Molecular Weight:	505.56
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



## Biological Description

Description	<p>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<sub>50</sub> values of approximately 4.3, 3.4, 5.9, 10, and 43 <math>\mu</math>M, respectively, in an in vitro assay.</p> <p>Methylstat inhibits growth of the JMJD2C-sensitive esophageal cancer cell line KYSE150 with a GI<sub>50</sub> of 5.1 <math>\mu</math>M, whereas the free acid of methylstat did not inhibit cell growth up to 100 <math>\mu</math>M. Methylstat induces histone hypermethylation at multiple sites in a concentration-dependent manner (EC<sub>50</sub> for H3K4me3 and H3K9me3 = 10.3 and 8.6 <math>\mu</math>M in KYSE150 cells and 6.7 and 6.3 <math>\mu</math>M in MCF-7 cells, respectively).</p>
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## Solubility Information

Solubility	DMSO: 25 mg/mL (< 1 mg/mL refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.978 mL	9.890 mL	19.780 mL
5 mM	0.396 mL	1.978 mL	3.956 mL
10 mM	0.198 mL	0.989 mL	1.978 mL
50 mM	0.040 mL	0.198 mL	0.396 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

## Reference

1. 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).

Inhibitors · Natural Compounds · Compound Libraries

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