

MS049 2HCl (1502816-23-0(free base))

## Chemical Properties

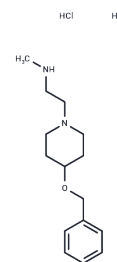
CAS No. :

Formula: C<sub>15</sub>H<sub>26</sub>Cl<sub>2</sub>N<sub>2</sub>O

Molecular Weight: 321.28

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	MS049 is a potent and selective inhibitor of PRMT4 (IC <sub>50</sub> = 34 nM) and PRMT6 (IC <sub>50</sub> = 43 nM). It is less active against additional type I PRMTs (IC <sub>50</sub> s = >130, >220, and 1.6 μM for PRMT1, PRMT3, and PRMT8, respectively) and displays no inhibition against type II or type III PRMTs nor any additional methyltransferases or nonepigenetic targets tested.
Targets(IC <sub>50</sub> )	Histone Methyltransferase
In vitro	MS049 has been shown to reduce the H3R2me2a mark in HEK293 cells with an IC <sub>50</sub> value of 0.97 μM and also, unexpectedly, to reduce H4R3me2a in HEK293 cells.
Cell Research	HEK293 cells were grown in 12-well plates in DMEM supplemented with 10% FBS, penicillin (100 units/mL) and streptomycin (100 μg/mL). 30% confluent cells were treated with different concentrations of compounds in triplicates or DMSO control for 72 h. Cells were lysed in 100 μL of total lysis buffer (20 mM Tris-HCl pH 8, 150 mM NaCl, 1 mM EDTA, 10 mM MgCl <sub>2</sub> , 0.5% TritonX-100, 12.5 U/mL benzonase, complete EDTA-free protease inhibitor cocktail). After 3 min incubation at RT, SDS was added to final 1% concentration. Lysates were run on SDS-PAGE and immunoblotting was done as outlined below to determine Med12-Rme2a levels in Western blot. They are for reference only.

## Solubility Information

Solubility	PBS(pH7.2): 10 mg/mL (31.13 mM),Sonication is recommended. DMSO: 30 mg/mL (93.38 mM),Sonication is recommended. Ethanol: 30 mg/mL (93.38 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	3.1125 mL	15.5627 mL	31.1255 mL
5 mM	0.6225 mL	3.1125 mL	6.2251 mL
10 mM	0.3113 mL	1.5563 mL	3.1125 mL
50 mM	0.0623 mL	0.3113 mL	0.6225 mL

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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

Shen Y, et al. Discovery of a Potent, Selective, and Cell-Active Dual Inhibitor of Protein Arginine Methyltransferase 4 and Protein Arginine Methyltransferase 6[J]. Journal of Medicinal Chemistry, 2016, 59(19):9124-9139.

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