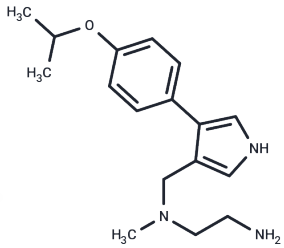
# Data Sheet (Cat.No.T6900)

TargetMol

MS023

## Chemical Properties



CAS No. : 1831110-54-3

Formula: C17H25N3O

Molecular Weight: 287.4

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

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|---|---|
| Description | MS023 is a potent, selective, and cell-active Type I PRMT inhibitor with IC50 values of 30 nM, 119 nM, 83 nM, 4 nM, and 5 nM for PRMT1, PRMT3, PRMT4, PRMT6, and PRMT8, respectively. |
| Targets(IC50) | Histone Methyltransferase |
| In vitro | MS023 potently reduces cellular levels of H4R3me2a in MCF7 and HEK293 cells by inhibiting PRMT1/6 methyltransferase activity with IC50 of 9 nM and 56 nM, respectively. MS023 also inhibits cell growth and potentially induces growth arrest and flattening morphology at low concentrations. [1] |
| Kinase Assay | PRMT Biochemical Assays: A scintillation proximity assay (SPA) is used for assessing the effect of test compounds on inhibiting the methyl transfer reaction catalyzed by PRMTs. In brief, the tritiated S-adenosyl-L-methionine (3H-SAM) is used as the donor of methyl group. The (3H) methylated biotin labeled peptide is captured in a streptavidin/scintillant-coated microplate, which brings the incorporated 3H-methyl and the scintillant to close proximity resulting in light emission that is quantified by tracing the radioactivity signal (counts per minute) as measured by a TopCount NXT Microplate Scintillation and Luminescence Counter. When necessary, nontritiated SAM is used to supplement the reactions. The IC50 values are determined under balanced conditions at Km concentrations of both substrate and cofactor by titration of test compounds in the reaction mixture. |

## Solubility Information

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|---|---|
| Solubility | Ethanol: 53 mg/mL (184.41 mM),Sonication is recommended.<br>H2O: < 1 mg/mL (insoluble or slightly soluble),<br>DMSO: 245 mg/mL (852.47 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (34.79 mM),Suspension.<br>10% DMSO+90% Saline: < 10 mg/mL (34.79 mM),Lower concentrations may be soluble, but exact solubility limit is unknown.<br>*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 | 3.4795 mL | 17.3974 mL | 34.7947 mL |
| 5 mM | 0.6959 mL | 3.4795 mL | 6.9589 mL |
| 10 mM | 0.3479 mL | 1.7397 mL | 3.4795 mL |
| 50 mM | 0.0696 mL | 0.3479 mL | 0.6959 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

Eram MS, et al. ACS Chem Biol. 2016, 11(3), 772-781.