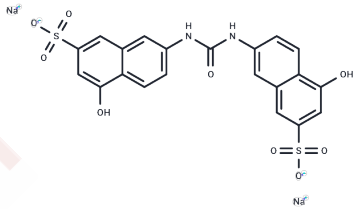
Data Sheet (Cat.No.T2352)

TargetMol

AMI-1

Chemical Properties



CAS No. : 20324-87-2

Formula: C21H14N2Na2O9S2

Molecular Weight: 548.45

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	AMI-1 is an effective and selective Histone Methyltransferase (HMT) inhibitor (IC50: 3.0 /8.8 μM, for yeast Hmt1p, and human PRMT1).
Targets(IC50)	Histone Methyltransferase
In vitro	In HeLa cells, AMI-1 inhibits methylation levels of GFP-Npl3 fusion and endogenous PRMT1-like activity. AMI-1 also inhibits nuclear receptor-mediated transactivation of a luciferase reporter in MCF7 cells. [1] In addition, AMI-1 inhibits HIV-1 RT polymerase activity with IC50 of 5 μM and inhibits DNA binding to HIV-1 RT with Kd of 2 μM. [2] In INS-1 cells, AMI-1 improves INS-1 cell function and mediates translocations of FOXO1 and PDX-1 intracellularly by regulating FOXO1 phosphorylation and methylation. [4]
In vivo	In chronic AIPI rats, AMI-1 (5 μg/rat) ameliorates COX2 expression and asthmatic indexes, and decreases the airway and alveoli lesions, mucus secretion, and collagen deposition in lungs. [3]
Kinase Assay	INS-1 832/13 cells are suspended in RPMI medium containing 11 mM glucose and the supplements described above. These cells are seeded at a density of 2×104?cells/well in a 96-well black plate coated with poly-D-lysine, and 1% BSA and 0.1% DMSO alone (control), palmitic acid (62.5, 125, 250, 500, and 1000 μM), oleic acid (62.5, 125, 250, 500, and 1000 μM), or TAK-875 (6.25, 12.5, 25, 50, and 100 μM) is added to the plate with 1% BSA and 0.1% DMSO, followed by culture for 72 h. After the culture, caspase 3/7 activity is measured with the Apo-one homogeneous caspase 3/7 assay according to the manufacturer's instructions. Fluorescence intensity is measured at an excitation of 485 nm and an emission at 535 nm.

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: 10 mg/mL (18.23 mM),Sonication is recommended. DMSO: 23.5 mg/mL (42.85 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 2.35 mg/mL (4.28 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (6.02 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.*

In vivo Formulation	*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	1.8233 mL	9.1166 mL	18.2332 mL
5 mM	0.3647 mL	1.8233 mL	3.6466 mL
10 mM	0.1823 mL	0.9117 mL	1.8233 mL
50 mM	0.0365 mL	0.1823 mL	0.3647 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

Cheng D, et al. J Biol Chem. 2004, 279(23), 23892-23899.
Li X, Wang Y, Zhang Y, et al. Overexpression of MCAM induced by SMYD2-H3K36me2 in breast cancer stem cell properties. Breast Cancer. 2022: 1-15
Feng G, Chen C, Luo Y.PRMT1 accelerates cell proliferation, migration, and tumor growth by upregulating ZEB1/H4R3me2as in thyroid carcinoma.Oncology Reports.2023, 50(6): 1-11.
Skillman AG, et al. Bioorg Chem. 2002, 30(6), 443-458.
Sun Q, et al. J Immunol. 2015, 195(1), 298-306.
Lv L, et al. Endocrine. 2015,49(3), 669-682.