

DC-05

Chemical Properties

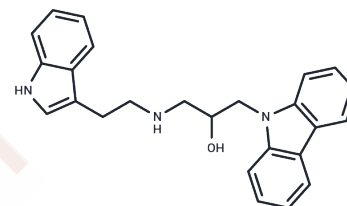
CAS No. : 890643-16-0

Formula: C₂₅H₂₅N₃O

Molecular Weight: 383.49

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	DC-05 is an inhibitor of DNA methyltransferase 1 (DNMT1) (IC ₅₀ and a K _d : 10.3 μM and 1.09 μM, respectively).
Targets(IC ₅₀)	Histone Methyltransferase, DNA Methyltransferase
In vitro	DC-05 is a non-nucleoside DNMT1 inhibitor with low micromolar IC ₅₀ values and significant selectivity toward other AdoMet-dependent protein methyltransferases. DC-05 (1.25, 2.5, 5, and 10 μM) effectively inhibits the proliferation of HCT116 (human colon cancer) and Capan-1 (human pancreatic adenocarcinoma cells) after treatment for 24, 48, and 72 h. DC-05 displays poor potent activities against DNMT3A, DNMT3B, G9a, SUV39H1, MLL1, SET7/9, and PRMT1 (IC ₅₀ : >200, >200, >150, >150, >150, >150, 37.1 μM) [1].

Solubility Information

Solubility	DMSO: 250 mg/mL (651.91 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: 10 mg/mL (26.08 mM), Solution. 10% DMSO+90% Saline: < 10 mg/mL (26.08 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Corn Oil: 3.3 mg/mL (8.61 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	2.6076 mL	13.0381 mL	26.0763 mL
5 mM	0.5215 mL	2.6076 mL	5.2153 mL
10 mM	0.2608 mL	1.3038 mL	2.6076 mL
50 mM	0.0522 mL	0.2608 mL	0.5215 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

Chen S, et al. Identifying novel selective non-nucleoside DNA methyltransferase 1 inhibitors through docking-based virtual screening. J Med Chem. 2014 Nov 13;57(21):9028-41.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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