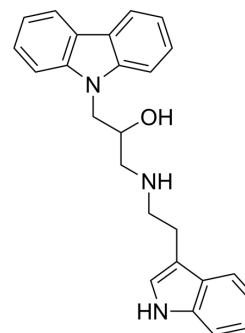


DC-05

Cat. No.:	HY-12746		
CAS No.:	890643-16-0		
Molecular Formula:	C ₂₅ H ₂₅ N ₃ O		
Molecular Weight:	383.49		
Target:	DNA Methyltransferase		
Pathway:	Epigenetics		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (260.76 mM; Need ultrasonic)				
	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	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
	Please refer to the solubility information to select the appropriate solvent.				
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.52 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	DC-05 is a DNA methyltransferase 1 (DNMT1) inhibitor, with an IC ₅₀ and a K _d of 10.3 μM and 1.09 μM, respectively.		
IC₅₀ & Target	DNMT1 1.09 μM (K _d)	DNMT1 10.3 μM (IC ₅₀)	PRMT1 37.1 μM (IC ₅₀)
In Vitro	DC-05 is a DNA methyltransferase 1 (DNMT1) inhibitor, with an IC ₅₀ and a K _d of 10.3 μM and 1.09 μM, respectively. DC-05 shows less potent activities against DNMT3A, DNMT3B, G9a, SUV39H1, MLL1, SET7/9, and PRMT1 (IC ₅₀ : >200, >200, >150, >150, >150, >150, 37.1 μM). DC-05 (1.25, 2.5, 5, and 10 μM) potently inhibits the proliferation of HCT116 (human colon cancer) and Capan-1 (human pancreatic adenocarcinoma cells) after treatment for 24, 48, and 72 h ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.		

PROTOCOL

Kinase Assay ^[1]

To measure the effects of DC-05 on mouse DNMT1 activity, 200 nM purified DNMT1 is incubated with 200 μ M of DC-05 and S-adenosylmethionine (AdoMet) in the DNMT assay buffer in the assay plate at 37°C for 2 h. Next, every sample is incubated with the capture and detection antibody, followed by incubation with developer solution for 10 min at room temperature. The absorbance is measured at 450 nm using a microplate reader. S-Adenosylhomocysteine (AdoHcy) is used as a positive control^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- bioRxiv. 2023 Jan 31.

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REFERENCES

[1]. 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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