

DY-46-2

Chemical Properties

CAS No. : 1105110-83-5

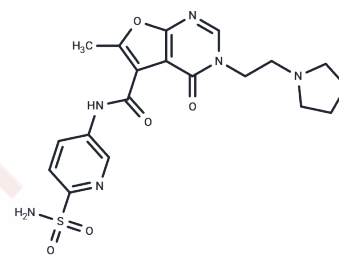
Formula: C₁₉H₂₂N₆O₅

Molecular Weight: 446.48

Store at low temperature

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	DY-46-2 is a selective non-nucleoside DNA methyltransferase 3A (DNMT3A) inhibitor (IC ₅₀ : 0.39 ± 0.23 μM) with anticancer activity for the study of cancer and tumors.
Targets(IC ₅₀)	DNA Methyltransferase
In vitro	DY-46-2 (0.1-100 μM, treated for 24, 48 and 72 h) showed inhibitory activity against DNMT3A with an IC ₅₀ value of 0.39 μM, and this inhibition increased linearly with increasing DNA concentration. DY-46-2 also showed inhibitory activity against DNMT1, DNMT3B and G9a with IC ₅₀ values of 13.0 μM, 105 μM and >500 μM, respectively. In a variety of cancer cell lines, DY-46-2 showed different cell viability inhibitory effects with the following IC ₅₀ values: THP-1 cells: 0.7 μM; HCT116 cells: 0.3 μM; U937 cells: 0.7 μM; K562 cells: 0.5 μM; A549 cells: 2.1 μM; DU145 cells: 1.7 μM; PBMC cells: 91 μM. DY-46-2 significantly inhibited the proliferation of cancer cells and showed low cytotoxicity in peripheral blood mononuclear cells (PBMCs). [1]

Solubility Information

Solubility	DMSO: 40 mg/mL (89.59 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2397 mL	11.1987 mL	22.3974 mL
5 mM	0.4479 mL	2.2397 mL	4.4795 mL
10 mM	0.224 mL	1.1199 mL	2.2397 mL
50 mM	0.0448 mL	0.224 mL	0.4479 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

Yu J, et al. Discovery of novel non-nucleoside inhibitors with high potency and selectivity for DNA methyltransferase 3A. Eur J Med Chem. 2022 Nov 15;242:114646.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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