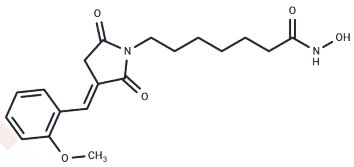
Data Sheet (Cat.No.T86561)

TargetMol

HDAC-IN-71

Chemical Properties



CAS No. : 2995354-52-2

Formula: C19H24N2O5

Molecular Weight: 360.4

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

Description	HDAC-IN-71 (Compound 17q), a potent HDAC inhibitor, exhibits IC 50 values of 12.6 nM for HDAC1, 14.1 nM for HDAC2, 20 nM for HDAC3, 3 nM for HDAC6, and 72 nM for HDAC10. This compound induces apoptosis and is utilized in cancer research [1].
Targets(IC50)	Apoptosis,HDAC
In vitro	HDAC-IN-71 effectively inhibits colony formation of DU145 cells in a dose-dependent manner at concentrations ranging from 0 to 1.6 μM over 24 hours, with complete inhibition occurring at 3.2 μM. Over a 72-hour period, it arrests the cells in the G2/M phase and induces apoptosis in a concentration-dependent manner. In a Cell Migration Assay, using DU145 cells with concentrations of 0 to 1.6 μM for 12 hours, HDAC-IN-71 inhibits cancer cell migration. Cell Cycle Analysis shows that DU145 cells are arrested in the G2/M phase with concentrations of 0 to 1.6 μM for 72 hours. Western Blot Analysis demonstrates histone acetylation induction and HDAC6 expression inhibition in DU145 cells treated with 0.8, 1.6, and 3.2 μM for 24 hours.
In vivo	HDAC-IN-71 was administered orally at doses of 100 and 200 mg/kg daily for a duration of 40 days in Balb/c nude mice, resulting in tumor growth inhibition (TGI) of 50.92% and 68.00% respectively [1]. Pharmacokinetic parameters indicated that the AUC 0-∞ for I.V. (2 mg/kg) and P.O. (10 mg/kg) were 1633.35 and 3799.46 (h ng/mL), half-lives (T 1/2) were 3.12 and 2.87 (h), clearance (CL) was 1.57 (L/h/kg), and volume of distribution (V) was 4.63 (L/kg). The maximum concentrations (C max) reached were 851.5 and 774.0 (ng/mL), with a bioavailability (F) of 46.52%. The results demonstrate a significant suppression of prostate cancer (PCa) tumor growth.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7747 mL	13.8735 mL	27.7469 mL
5 mM	0.5549 mL	2.7747 mL	5.5494 mL
10 mM	0.2775 mL	1.3873 mL	2.7747 mL
50 mM	0.0555 mL	0.2775 mL	0.5549 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.