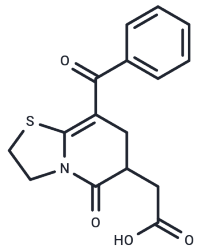
Data Sheet (Cat.No.T205002)

TargetMol

193 D7

Chemical Properties



CAS No. : 861224-48-8

Formula: C16H15NO4S

Molecular Weight: 317.36

Storage: Keep away from moisture
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	193 D7 is an orally bioavailable and selective JMJD1C inhibitor with an IC_{50} of 0.59 μM and a Kd of 1.96 μM. In HTRF assays, it blocks the binding of JMJD1C to the H3K9me2 peptide substrate with an IC_{50} of 1.47 μM. 193 D7 regulates the fitness of regulatory T cells (Tregs) in the tumor microenvironment via a dual mechanism: it promotes H3K9me2 enrichment to downregulate PD-1 expression and inhibits STAT3 demethylation to enhance STAT3 activation. It exhibits dose-dependent antitumor activity in multiple mouse tumor models, including MCA205 fibrosarcoma, B16-F10 melanoma, LLC lung cancer, Hepa1-6 hepatoma, and CT26 colorectal cancer, and can be used as a tool molecule for selectively targeting intratumoral Tregs in tumor immunity research.
Targets(IC50)	Histone Demethylase
In vitro	Methods: The effects of 193 D7 on JMJD1C were determined using HTRF assays and in vitro demethylation assays. Results: 193 D7 inhibited the binding of JMJD1C to the H3K9me2 peptide substrate (IC_{50} = 1.47 μM) and suppressed the demethylase activity of JMJD1C toward H3K9me2 (IC_{50} = 0.59 μM) [1].
In vivo	Methods: In tumor-bearing C57BL/6 mouse models, 193 D7 (10-25 mg/kg) was intraperitoneally injected once daily for 2 consecutive weeks, or orally administered at 25 mg/kg once daily for 12 consecutive days. Mice were inoculated with MCA205 fibrosarcoma, MCA205, B16, LLC, and EL4 cells, respectively. Results: 193 D7 exhibited dose-dependent antitumor effects in the above tumor-bearing mice [1].

Solubility Information

Solubility	DMSO: 8 mg/mL (25.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.151 mL	15.755 mL	31.510 mL
5 mM	0.6302 mL	3.151 mL	6.302 mL
10 mM	0.3151 mL	1.5755 mL	3.151 mL
50 mM	0.063 mL	0.3151 mL	0.6302 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

Xuehui Long, et al. Targeting JMJD1C to selectively disrupt tumor Treg cell fitness enhances antitumor immunity. Nat Immunol. 2024.