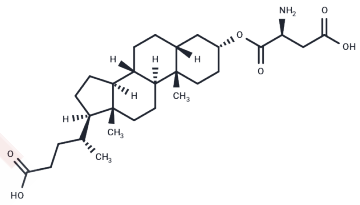
Data Sheet (Cat.No.T11858)

TargetMol

Lith-O-Asp

Chemical Properties



CAS No. : 881179-02-8

Formula: C28H45NO6

Molecular Weight: 491.66

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Lith-O-Asp is a sialytransferase (ST) inhibitor with IC50 values ranging from 12 to 37 μM.
Targets(IC50)	Others
In vitro	The results indicate that Lith-O-Asp reduces the activity of both a-2,3- and a-2,6-sialyltransferases, consequently inhibiting the transfer of sialic acids to target glycoproteins[1]. Despite showing no significant growth inhibition effect on various cancer cell lines at doses of 10, 30, and 60 μM, in vitro assays reveal Lith-O-Asp's capability to suppress the activities of ST3Gal I, ST3Gal III, and ST6GalI, with IC50 values ranging from 12 to 37 μM. Furthermore, flow cytometry analysis demonstrates a marked decrease in the expression of cell surface a-2,3- and a-2,6-sialylated antigens.
In vivo	In lung tissues of mice treated with DMSO and observed using the IVIS in vivo imaging system, a significant presence of secondary metastatic cancer cells was noted 26 days post-fat pad inoculation. Conversely, mice treated with Lith-O-Asp exhibited a reduction in lung metastases, with only 3 of 8 mice showing any metastasis compared to all DMSO-treated mice. The average number of tumor nodules per mouse in the DMSO group was 11±9, while in the Lith-O-Asp group, it was significantly lower at 2±4 nodules. Additionally, 4T1-Luc illumination signals, indicating tumor presence, were markedly stronger in the DMSO control group than in the Lith-O-Asp-treated group on days 7 and 9[1].

Solubility Information

Solubility	DMSO: 106 mg/mL (215.6 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0339 mL	10.1696 mL	20.3393 mL
5 mM	0.4068 mL	2.0339 mL	4.0679 mL
10 mM	0.2034 mL	1.017 mL	2.0339 mL
50 mM	0.0407 mL	0.2034 mL	0.4068 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.

Reference

Chen JY, et al. A novel sialyltransferase inhibitor suppresses FAK/paxillin signaling and cancer angiogenesis and metastasis pathways. Cancer Res. 2011 Jan 15;71(2):473-83.