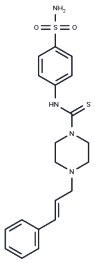
Data Sheet (Cat.No.T7399)

TargetMol

LF3

Chemical Properties



CAS No. : 664969-54-4

Formula: C20H24N4O2S2

Molecular Weight: 416.56

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	LF3 is a specific inhibitor of canonical Wnt signaling by disrupting the interaction between β-catenin and TCF4 (IC50 < 2 μM)
Targets(IC50)	Wnt/beta-catenin
In vitro	LF3 inhibited Wnt/β-catenin signals in cells with exogenous reporters and in colon cancer cells with endogenously high Wnt activity. LF3 also suppressed features of cancer cells related to Wnt signaling, including high cell motility, cell-cycle progression, and the overexpression of Wnt target genes[1].
In vivo	LF3 reduced tumor growth and induced differentiation in a mouse xenograft model of colon cancer.LF3 is a specific inhibitor of canonical Wnt signaling with anticancer activity [1].
Animal Research	Unsorted GFPlow and GFPhigh SW480 cells (1 × 10^4) were subcutaneously injected into the back skin of NOD/SCID mice. Tumor growth was monitored over a period of 45 days. For therapy, LF3 was administered i.v. at 50 mg/kg body weight for three rounds over 5 consecutive days, with 2-day breaks[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (600.15 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (24.01 mM),Solution. 10% DMSO+90% Saline: < 10 mg/mL (24.01 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4006 mL	12.0031 mL	24.0061 mL
5 mM	0.4801 mL	2.4006 mL	4.8012 mL
10 mM	0.2401 mL	1.2003 mL	2.4006 mL
50 mM	0.048 mL	0.2401 mL	0.4801 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

Fang L , Zhu Q , Neuenschwander M , et al. A Small-Molecule Antagonist of the β-Catenin/TCF4 Interaction Blocks the Self-Renewal of Cancer Stem Cells and Suppresses Tumorigenesis[J]. Cancer Research, 2015, 76(4):891-901.
Bi G, Liang J, Bian Y, et al.Polyamine-mediated ferroptosis amplification acts as a targetable vulnerability in cancer.Nature Communications.2024, 15(1): 2461.
Zhao L, Sun L, Lu Y,ea al.A small-molecule LF3 abrogates β-catenin/TCF4-mediated suppression of NaV1.5 expression in HL-1 cardiomyocytes[J].J Mol Cell Cardiol. 2019 Oct;135:90-96.