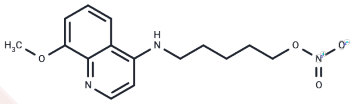
Data Sheet (Cat.No.T40565)

TargetMol

5MPN

Chemical Properties



CAS No. : 47208-82-2

Formula: C15H19N3O4

Molecular Weight: 305.33

Storage: Store at low temperature
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	5MPN is an orally active and selective inhibitor of 6-phosphofructokinase-2-kinase (PFKFB4) that competitively inhibits the F6P binding site and inhibits the proliferation of myeloma cells, and can be used in the study of myeloproliferative neoplasms.
Targets(IC50)	Glucokinase,Phosphatase
In vitro	In H460 cells, 5MPN (0-30 μM; 24 hours) is able to inhibit the expression of PFKFB4[2].
In vivo	5MPN (120 mg/kg; p.o.) effectively inhibits the growth of Lewis lung carcinomas (LLC) in C57BL/6 mice and H460 human lung adenocarcinoma xenografts in athymic mice, without impacting body weight. A decline in Ki67-positive cells within LLC xenografts suggests 5MPN interferes with cell cycle progression in vivo[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (262.01 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: 3.3 mg/mL (10.81 mM),Sonication is recommended. *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	3.2751 mL	16.3757 mL	32.7514 mL
5 mM	0.655 mL	3.2751 mL	6.5503 mL
10 mM	0.3275 mL	1.6376 mL	3.2751 mL
50 mM	0.0655 mL	0.3275 mL	0.655 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

Chesney J, et al. Targeting the sugar metabolism of tumors with a first-in-class 6-phosphofructo-2-kinase (PFKFB4) inhibitor. Oncotarget. 2015;6(20):18001-18011.