

MBM-55

Chemical Properties

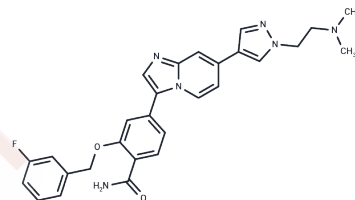
CAS No. : 2083622-09-5

Formula: C₂₈H₂₇FN₆O₂

Molecular Weight: 498.55

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	MBM-55 is an effective inhibitor of NIMA related kinase 2 (NEK2) with an IC ₅₀ of 1 nM. MBM-55 effectively inhibits the proliferation of cancer cells by inducing cell cycle arrest and apoptosis.
Targets(IC ₅₀)	Apoptosis,MAPK,Akt,Bcr-Abl,CDK,Aurora Kinase,Chk,DYRK,GSK-3,S6 Kinase
In vitro	MBM-55 (0.5-1 μM; 24 hours) induces G2/M phase arrest and accumulation of cells with >4N content in HCT-116 cells. MBM-55 (0.5-1 μM; 24 hours) causes cell apoptosis in a concentration-dependent manner in HCT-116 cells.MBM-55 inhibits MGC-803, HCT-116, Bel-7402 cells proliferation with IC ₅₀ s of 0.53, 0.84, 7.13 μM, respectively[1].
In vivo	In female BALB/c nu/nu mice bearing HCT-116 xenografts, MBM-55 (20 mg/kg; i.p.) exhibits good antitumor activity and a well-tolerated dose schedule. MBM-55 (1.0 mg/kg; i.v.) shows the CL, V _{ss} , T _{1/2} , AUC _{0-t} , and AUC _{0-∞} values of 33.3 mL/min/kg, 2.53 L/kg, 1.72 hours, 495 ng/h/mL and 507 ng/h/mL, respectively[1].

Solubility Information

Solubility	DMSO: 150 mg/mL (300.87 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0058 mL	10.0291 mL	20.0582 mL
5 mM	0.4012 mL	2.0058 mL	4.0116 mL
10 mM	0.2006 mL	1.0029 mL	2.0058 mL
50 mM	0.0401 mL	0.2006 mL	0.4012 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

Xi JB, et al. Structure-based design and synthesis of imidazo[1,2-a]pyridine derivatives as novel and potent Nek2 inhibitors with in vitro and in vivo antitumor activities. *Eur J Med Chem.* 2017 Jan 27;126:1083-1106.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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