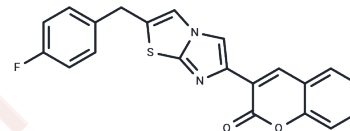


iMDK

Chemical Properties

CAS No. :	881970-80-5
Formula:	C ₂₁ H ₁₃ FN ₂ O ₂ S
Molecular Weight:	376.4
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	iMDK quarterhydrate is a potent PI3K inhibitor that inhibits the growth factor MDK (also known as midkine or MK). iMDK quarterhydrate synergistically inhibits non-small cell lung cancer (NSCLC) with MEK inhibitors without harming normal cells and mice.
Targets(IC50)	PI3K
In vitro	Administration of iMDK (50-500 nM) for 72 h quarterhydrate suppressed AKT phosphorylation in H441 lung adenocarcinoma cells after treatment dose-dependently. In contrast, iMDK quarterhydrate robustly increases p-ERK[1].
In vivo	Intraperitoneally injection with 100 µl of iMDK (9 mg/kg/day) and ; oral administration of PD0325901 (5 mg/kg) effectively reduced lung tumor growth in a xenograft mouse model[1].

Solubility Information

Solubility	DMSO: 0.84 mg/mL (2.23 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	2.6567 mL	13.2837 mL	26.5675 mL
5 mM	0.5313 mL	2.6567 mL	5.3135 mL
10 mM	0.2657 mL	1.3284 mL	2.6567 mL
50 mM	0.0531 mL	0.2657 mL	0.5313 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

Naomasa Ishida, et al. A novel PI3K inhibitor iMDK suppresses non-small cell lung Cancer cooperatively with A MEK inhibitor. *Exp Cell Res.* 2015 Jul 15;335(2):197-206.

Wan Z, Bai X, Wang X, et al. Mgp High-Expressing MSCs Orchestrate the Osteoimmune Microenvironment of Collagen/Nanohydroxyapatite-Mediated Bone Regeneration. *Advanced Science.* 2024: 2308986.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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