

SKI-178

Chemical Properties

CAS No. : 1259484-97-3

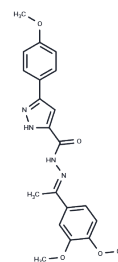
Formula: C₂₁H₂₂N₄O₄

Molecular Weight: 394.42

Store at low temperature

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	SKI-178 is a sphingosine kinase 1 (SphK1) inhibitor with IC ₅₀ of 0.1-1.8 μM. It induces prolonged mitosis followed by apoptotic cell death through the intrinsic apoptotic cascade. The sustained activation of CDK1 during prolonged mitosis, mediated by SKI-178 leads to the simultaneous phosphorylation of the prosurvival Bcl-2 family members, Bcl-2 and Bcl-xl, as well as the phosphorylation and subsequent degradation of Mcl-1.
Targets(IC ₅₀)	Apoptosis,S1P Receptor
In vitro	SKI-178 is a multi-targeted agent that functions both as an inhibitor of the SphKs as well as a disruptor of the microtubule network. SKI-178 induced apoptosis arises from a synergistic interaction of these two activities. SKI-178 is safe and effective in mouse models of AML, supporting its further development as a multi-targeted anti-cancer therapeutic agent[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (126.77 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 2.5 mg/mL (6.34 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5354 mL	12.6768 mL	25.3537 mL
5 mM	0.5071 mL	2.5354 mL	5.0707 mL
10 mM	0.2535 mL	1.2677 mL	2.5354 mL
50 mM	0.0507 mL	0.2535 mL	0.5071 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

Hengst JA, et al. SKI-178: A Multitargeted Inhibitor of Sphingosine Kinase and Microtubule Dynamics Demonstrating Therapeutic Efficacy in Acute Myeloid Leukemia Models. *Cancer Transl Med.* 2017;3(4):109-121.
Dick TE, et al. The apoptotic mechanism of action of the sphingosine kinase 1 selective inhibitor SKI-178 in human acute myeloid leukemia cell lines. *J Pharmacol Exp Ther.* 2015;352(3):494-508.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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