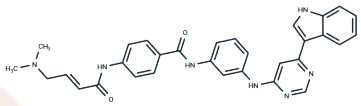
Data Sheet (Cat.No.T39459)

TargetMol

THZ-P1-2

Chemical Properties



CAS No. : 2058075-45-7

Formula: C31H29N7O2

Molecular Weight: 531.61

Storage: Keep away from direct sunlight,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	THZ-P1-2 is a selective and potent PI5P4K inhibitor with anti-leukemic activity that acts by disrupting mitochondrial homeostasis and autophagy.THZ-P1-2 induces cell death and mitochondrial damage, and can be used in the study of leukemias.
Targets(IC50)	Autophagy,PI3K
In vitro	THZ-P1-2 (0.2-11.4 μM) exhibits approximately 75% inhibition of PI-4,5-P2 formation by PI5P4Kα and PI5P4Kγ and 50% inhibition by PI5P4Kβ at 0.7 μM[1]. THZ-P1-2 (10-100000 nM; 72 hours) demonstrates modest anti-proliferative activity across six AML/ALL cell lines, with IC50 values ranging from 0.87 to 3.95 μM[1]. Cell Proliferation Assay[1]Cell Line: THP1, SEMK2, OCI/AML-2, HL60, SKM1, NOMO1 cells. Concentration: 10-100000 nM. Incubation Time: 72 hours. Result: Anti-proliferative activity with IC50 values from 0.87 to 3.95 μM.

Solubility Information

Solubility	DMSO: 80 mg/mL (150.49 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 (6.21 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	1.8811 mL	9.4054 mL	18.8108 mL
5 mM	0.3762 mL	1.8811 mL	3.7622 mL
10 mM	0.1881 mL	0.9405 mL	1.8811 mL
50 mM	0.0376 mL	0.1881 mL	0.3762 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

Sivakumaren SC, et al. Targeting the PI5P4K Lipid Kinase Family in Cancer Using Covalent Inhibitors. Cell Chem Biol. 2020;27(5):525-537.e6.

Lima K, Pereira-Martins DA, de Miranda LBL, Coelho-Silva JL, Leandro GDS, Weinhäuser I, Cavaglieri RC, Leal AM, da Silva WF, Lange APAL, Velloso EDRP, Griessinger E, Hilberink JR, Ammatuna E, Huls G, Schuringa JJ, Rego EM, Machado-Neto JA. The PIP4K2 inhibitor THZ-P1-2 exhibits antileukemia activity by disruption of mitochondrial homeostasis and autophagy. Blood Cancer J. 2022 Nov 9;12(11):151.