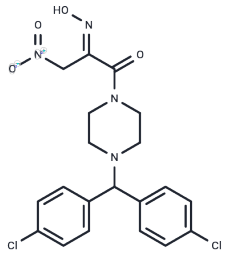
Data Sheet (Cat.No.T37314)

TargetMol

JKE-1674

Chemical Properties



CAS No. : 2421119-60-8

Formula: C20H20Cl2N4O4

Molecular Weight: 451.3

Storage: Keep away from direct sunlight
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	JKE-1674 is an orally active glutathione peroxidase 4 (GPX4) inhibitor and the active metabolite of ML-210, which is converted to butyronitrile oxide JKE-1777. JKE-1674 kills LOX-IMVI cells in the same manner as ML-210 and is completely rescued by ferroptosis inhibitors.
Targets(IC50)	Ferroptosis,Glutathione Peroxidase,GPX
In vitro	JKE-1674 reduces the viability of LOX-IMVI cancer cells with an EC50 of 0.03 μM and in a panel of additional cancer cell lines. JKE-1674 is completely rescued by ferroptosis inhibitors[1].
In vivo	Mice can be orally dosed with JKE-1674 and the compound can be detected in the serum for up to 24 hours.[1]

Solubility Information

Solubility	DMSO: 140 mg/mL (310.21 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn oil: < 10 mg/mL (22.16 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: < 10 mg/mL (22.16 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% (20% SBE-β-CD in Saline): < 10 mg/mL (22.16 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Saline: < 10 mg/mL (22.16 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *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	2.2158 mL	11.0791 mL	22.1582 mL
5 mM	0.4432 mL	2.2158 mL	4.4316 mL
10 mM	0.2216 mL	1.1079 mL	2.2158 mL
50 mM	0.0443 mL	0.2216 mL	0.4432 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

Kathman SG, et al. A masked zinger to block GPXNat Chem Biol. 2020 May;16(5):482-48doi: 10.1038/s41589-020-0511-3.
Ma Y, Yao X, Zou Y, et al.Ticlopidine protects Hepatic Ischemia-Reperfusion Injury via suppressing ferroptosis. Biochemical and Biophysical Research Communications.2024: 150436.
Eaton JK, et al. Selective covalent targeting of GPX4 using masked nitrile-oxide electrophiles. Nat Chem Biol. 2020 May;16(5):497-506.
Bian R, Shang Y, Xu N, et al.HDAC inhibitor enhances ferroptosis susceptibility of AML cells by stimulating iron metabolism.Cellular Signalling.2025: 111583.