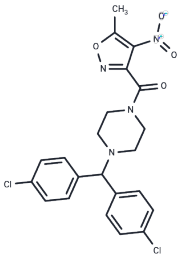
Data Sheet (Cat.No.T8375)

TargetMol

ML-210

Chemical Properties



CAS No. : 1360705-96-9

Formula: C22H20Cl2N4O4

Molecular Weight: 475.32

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	ML-210 (CID 49766530) is a glutathione peroxidase 4 (GPX4) inhibitor (EC50=30 nM) that is covalent and selective. ML-210 has antitumor activity and induces ferroptosis.
Targets(IC50)	Ferroptosis,Glutathione Peroxidase,GPX,Ras
In vitro	**METHODS**: Human lung adenocarcinoma cell line HCC4006 was treated with ML-210 (10 μM) for 1 h. CETSA profiles were detected by Western Blot. **RESULTS**: ML-210 affects the thermal stability of GPX4, consistent with the binding to the cellular target. [1] **METHODS**: DRD cell lines were treated with ML-210 for 48 h, and cell viability was measured. **RESULTS**: ML-210 has an IC50 of 107 nM in the DRD cell line. [2]

Solubility Information

Solubility	DMSO: 27.63 mg/mL (58.13 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: 1.1 mg/mL (2.31 mM),Suspension. *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	2.1038 mL	10.5192 mL	21.0385 mL
5 mM	0.4208 mL	2.1038 mL	4.2077 mL
10 mM	0.2104 mL	1.0519 mL	2.1038 mL
50 mM	0.0421 mL	0.2104 mL	0.4208 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

Eaton JK, et al. Selective covalent targeting of GPX4 using masked nitrile-oxide electrophiles. Nat Chem Biol. 2020 May;16(5):497-506.
Li P, Lin Q, Sun S, et al. Inhibition of cannabinoid receptor type 1 sensitizes triple-negative breast cancer cells to ferroptosis via regulating fatty acid metabolism. Cell Death & Disease. 2022, 13(9): 1-15.
Bi G, Liang J, Shan G, et al.Retinol saturase mediates retinoid metabolism to impair a ferroptosis defense system in cancer cells.Cancer Research.2023: CAN-22-3977.
Weïwer M, et al. Development of small-molecule probes that selectively kill cells induced to express mutant RAS. Bioorg Med Chem Lett. 2012 Feb 15;22(4):1822-6.
John K. Eaton, et al. Targeting a Therapy-Resistant Cancer Cell State Using Masked Electrophiles as GPX4 Inhibitors. Biorxiv. 2018.