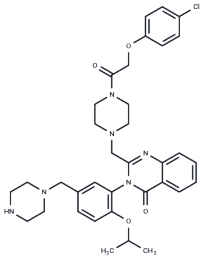
Data Sheet (Cat.No.T16540)

TargetMol

Piperazine Erastin

Chemical Properties



CAS No. : 1538593-71-3

Formula: C35H41ClN6O4

Molecular Weight: 645.19

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	Piperazine erastin, an analog of erastin, induces ferroptosis, an iron-dependent form of non-apoptotic cell death.
Targets(IC50)	Ferroptosis
In vitro	Piperazine erastin is affected similarly by cell death modulators as erastin and displays a distinct pattern from other non-FIN lethal compounds. Piperazine erastin is a more effective analog of erastin which is more water-soluble (0.086 mM for erastin versus 1.4 mM for piperazine erastin) and more metabolically stable [1].
In vivo	A significant delay in tumor growth is observed in the piperazine erastin-treated group compared to the vehicle-treated group, in the xenograft mouse model. Ptgs2 is upregulated in mouse liver with piperazine erastin (10 or 60 mg/kg) administration[1].

Solubility Information

Solubility	DMSO: 132.5 mg/mL (205.37 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: 2 mg/mL (3.1 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	1.5499 mL	7.7497 mL	15.4993 mL
5 mM	0.310 mL	1.5499 mL	3.0999 mL
10 mM	0.155 mL	0.775 mL	1.5499 mL
50 mM	0.031 mL	0.155 mL	0.310 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

Yang WS, et al. Regulation of ferroptotic cancer cell death by GPX4. Cell. 2014 Jan 16;156(1-2):317-331.
Frye W J E, Huff L M, Dalmasy J M G, et al.The Multidrug Resistance Transporter P-glycoprotein Confers Resistance to Ferroptosis Inducers.bioRxiv.2023: 2023.02. 23.529736.