Data Sheet (Cat.No.T200070)

TargetMol

GPX4-IN-14

Chemical Properties

CAS No. :

Formula: C26H39NO8Se

Molecular Weight: 572.55

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	GPX4-IN-14 (compound 2c) acts as a GPX4 inhibitor, exhibiting both free radical scavenging activity (with a maximum scavenging rate of 72.52%) and anti-tumor proliferation activity in vitro. This compound targets GPX4 protein, elevating lipid peroxide and intracellular Reactive Oxygen Species (ROS) levels, which induces ferroptosis and contributes to its anti-tumor proliferation effects.
Targets(IC50)	Ferroptosis,Reactive Oxygen Species,Glutathione Peroxidase
In vitro	GPX4-IN-14 (100 μM, 30 min) exhibits potent radical scavenging activity, achieving a maximal scavenging rate of 72.52%. It displays antiproliferative effects against several cancer cell lines including SW480, HCT116, HepG2, and MCF-7 with IC50 values of 5.61 μM, 6.59 μM, 18.23 μM, and 9.73 μM respectively, and has an IC50 of 11.64 μM in LO2 cells. At concentrations of 3.3, 6.6, and 13.2 μM over 24 hours, GPX4-IN-14 inhibits the GPX4 pathway in HCT116 cells, inducing a dose-dependent accumulation of intracellular ROS and lipid ROS, which leads to ferroptosis and mitochondrial membrane potential suppression. Additionally, GPX4-IN-14 increases intracellular iron levels in a dose-dependent manner within HCT116 cells at the same concentrations and duration.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7466 mL	8.7329 mL	17.4657 mL
5 mM	0.3493 mL	1.7466 mL	3.4931 mL
10 mM	0.1747 mL	0.8733 mL	1.7466 mL
50 mM	0.0349 mL	0.1747 mL	0.3493 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.

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