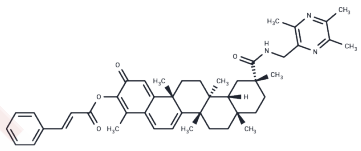
Data Sheet (Cat.No.T78785)

PRDX1-IN-1

Chemical Properties



CAS No. : 2996096-63-8

Formula: C46H55N3O4

Molecular Weight: 713.95

Storage: 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	PRDX1-IN-1 is a selective and potent PRDX1 inhibitor with potential anti-inflammatory and anticancer activity for the study of breast and esophageal cancer.
Targets(IC50)	Apoptosis,ROS Kinase
In vitro	PRDX1-IN-1 (0.5-10 μM; 48 hours) was able to inhibit the proliferative activity of lung cancer cell lines (LTEP-a-2 and H1975), and human breast cancer cell line (MDA-MB-231)[1].
In vivo	PRDX1-IN-1 (0.5 or 1 mg/kg; once daily for 19 days; intraperitoneal injection) treatment in C57BL/6J male mice inoculated with Lewis cells (lung cancer) was found to significantly inhibit tumor growth and induce morphological changes in tumor cells, including cell aggregation, contraction, and nuclear chromatin margination[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (112.05 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 (4.62 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	1.4007 mL	7.0033 mL	14.0066 mL
5 mM	0.2801 mL	1.4007 mL	2.8013 mL
10 mM	0.1401 mL	0.7003 mL	1.4007 mL
50 mM	0.028 mL	0.1401 mL	0.2801 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

Ying Bai, et al. Development of novel celastrol-ligustrazine hybrids as potent peroxiredoxin 1 inhibitors against lung cancer. Eur J Med Chem. 2023, 259, 115656.
Ding C,et al. Peroxiredoxin 1 - an antioxidant enzyme in cancer. J Cell Mol Med. 2017 Jan;21(1):193-202.