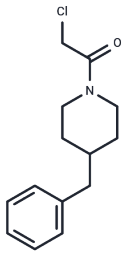
Data Sheet (Cat.No.T213767)

TargetMol

GSTO1-IN-3

Chemical Properties



CAS No. : 158890-32-5

Formula: C14H18ClNO

Molecular Weight: 251.75

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	GSTO1-IN-3 is a potent inhibitor of GSTO1-1, with an IC50 value of 0.11 μM, and exhibits selectivity towards GSTO2-2, GSTA1-1, and GSTP1-1 (IC50> 100 μM). It enhances the cytotoxic effects of Cisplatin on human breast cancer cells and inhibits IL-1β release in mouse bone marrow-derived macrophages (BMDM). Additionally, GSTO1-IN-3 reduces inflammation in mice and is applicable for research related to breast cancer and inflammation.
In vitro	GSTO1-IN-3 (compound 5C-1) demonstrates favorable in vitro safety, as it shows no thiol reactivity in ALARM NMR experiments and lacks mutagenicity in Ames tests with *Salmonella typhimurium* strains TA98 and TA100 at concentrations up to 2 mg/mL. It exhibits greater stability in human liver microsomes compared to mouse microsomes. GSTO1-IN-3 forms a covalent bond with the Cys32 of GSTO1-1, with an inhibition efficiency constant (k_nc/K) of 3.4×10^4 $M^{-1}s^{-1}$. At a concentration of 5 μM, GSTO1-IN-3 reduces IL-1β release by 59.2% in mouse bone marrow-derived macrophages (BMDM). Additionally, at 5-50 μM for 24 hours, it exhibits a synergistic effect with Cisplatin, significantly enhancing cytotoxicity in a concentration-dependent manner against human breast cancer MDA-MB-231 cells.
In vivo	GSTO1-IN-3, when administered intraperitoneally at a dose of 30 mg/kg, 30 minutes prior to LPS injection, can mitigate the inflammation induced by lipopolysaccharide (LPS) in mice.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9722 mL	19.861 mL	39.7219 mL
5 mM	0.7944 mL	3.9722 mL	7.9444 mL
10 mM	0.3972 mL	1.9861 mL	3.9722 mL
50 mM	0.0794 mL	0.3972 mL	0.7944 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.