Data Sheet (Cat.No.T67846)

TargetMol

AKR1C3-IN-9

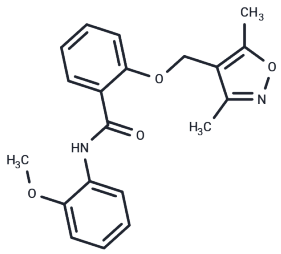
Chemical Properties

CAS No. :

Formula: C20H20N2O4

Molecular Weight: 352.38

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	AKR1C3-IN-9, a selective Aldo-keto Reductase 1C3 (AKR1C3) inhibitor (IC50 = 8.92 nM), can significantly reverse Doxorubicin (DOX) resistance in a resistant breast cancer cell line.
Targets(IC50)	Reductase,NADPH
In vitro	AKR1C3-IN-9 (compound 24) (10-100 μM; 72 h and 96 h) shows a weak antiproliferative effect on three breast cancer cell lines (MDA-MB-231, MCF-7) with an inhibition range of up to 100 μM. AKR1C3-IN-9 (10 μM, 25 μM, 50 μM; 72 hours) in conjunction with 10-50 μM DOX synergistically inhibits the proliferation of MCF-7 cells. AKR1C3-IN-9 (10 μM; 8 d) with 50 μM DOX synergistically inhibits the proliferation and clonal survival of MCF-7/DOX cell lines, reinstating sensitivity to DOX [1].

Solubility Information

Solubility	DMSO: 50 mg/mL (141.89 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 (5.68 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	2.8378 mL	14.1892 mL	28.3785 mL
5 mM	0.5676 mL	2.8378 mL	5.6757 mL
10 mM	0.2838 mL	1.4189 mL	2.8378 mL
50 mM	0.0568 mL	0.2838 mL	0.5676 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

Liu Y, et al. Development of highly potent and specific AKR1C3 inhibitors to restore the chemosensitivity of drug-resistant breast cancer. Eur J Med Chem. 2022 Dec 13;247:115013.