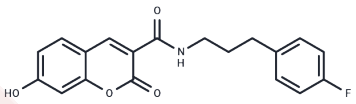
Data Sheet (Cat.No.T39594)

TargetMol

AKR1B10-IN-1

Chemical Properties



CAS No. : 2136579-33-2

Formula: C19H16FNO4

Molecular Weight: 341.338

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	AKR1B10-IN-1, a powerful AKR1B10 (Aldo-Keto Reductase 1B10) inhibitor, demonstrates an IC50 value of 3.5 nM. This compound effectively curtails the proliferation, metastasis, and Cisplatin (CDDP) resistance of lung cancer cells.
Targets(IC50)	Others,Reductase
In vitro	AKR1B10-IN-1 (compound 4e), at concentrations ranging from 0 to 20 μM over 96 hours, effectively inhibits the growth of both A549 and AKR1B10-stably overexpressing A549 cells (A549/1B10), demonstrating a potent ability to hinder cell proliferation attributed to both overexpressed and endogenous AKR1B10. Additionally, at concentrations up to 40 μM, with a 2-hour pre-treatment followed by a 24-hour incubation with cisplatin (CDDP), AKR1B10-IN-1 significantly reduces cell viability in cisplatin-resistant A549 cells (CDDP-R-A549) in a dose-responsive manner. Cell viability assays confirm these effects, showing a statistically significant suppression in A549 and A549/1B10 cell growth at 20 μM and a noticeable decrease in viability of CDDP-R-A549 cells, particularly at 40 μM, after pretreatment with AKR1B10-IN-1 followed by CDDP exposure.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9296 mL	14.6482 mL	29.2963 mL
5 mM	0.5859 mL	2.9296 mL	5.8593 mL
10 mM	0.293 mL	1.4648 mL	2.9296 mL
50 mM	0.0586 mL	0.293 mL	0.5859 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

Endo S, et al. Synthesis of Potent and Selective Inhibitors of Aldo-Keto Reductase 1B10 and Their Efficacy against Proliferation, Metastasis, and Cisplatin Resistance of Lung Cancer Cells [published correction appears in J Med Chem. 2018 Feb 8;61(3):1380]. J Med Chem. 2017;60(20):8441-8455.

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