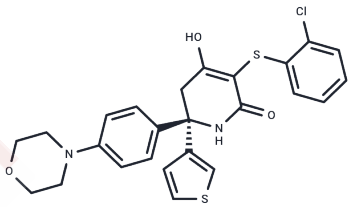
Data Sheet (Cat.No.T4295)

TargetMol

(R)-GNE-140

Chemical Properties



CAS No. : 2003234-63-5

Formula: C25H23ClN2O3S2

Molecular Weight: 499.04

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	(R)-GNE-140 (GNE-140) is an effective LDHA/LDHB inhibitor (IC50s: 3/5 nM) and is 18-fold more potent than S enantiomer.
Targets(IC50)	Dehydrogenase
In vitro	(R)-GNE-140 (5 μM) inhibits proliferation in 37 of 347 cancer cell lines. (R)-GNE-140 has an inhibitory effect on two chondrosarcomas (bone) cancer cell lines that harbor IDH1 mutations (IC50: 0.8 mM).
In vivo	(R)-GNE-140 demonstrates high bioavailability in mice at 5 mg/kg and achieves greater exposure at oral doses of 50-200 mg/kg.

Solubility Information

Solubility	DMSO: 21.43 mg/mL (42.94 mM),Sonication is recommended. DMF: 25mg/mL (50.09 mM),Sonication is recommended. H2O: < 0.1 mg/mL (insoluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 2.14 mg/mL (4.29 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.14 mg/mL (4.29 mM),Solution. *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	2.0038 mL	10.0192 mL	20.0385 mL
5 mM	0.4008 mL	2.0038 mL	4.0077 mL
10 mM	0.2004 mL	1.0019 mL	2.0038 mL
50 mM	0.0401 mL	0.2004 mL	0.4008 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

Purkey HE, et al. Cell Active Hydroxylactam Inhibitors of Human Lactate Dehydrogenase with Oral Bioavailability in Mice. ACS Med Chem Lett. 2016 Aug 26;7(10):896-901.

Zhang Y T, Xing M L, Fang H H, et al.Effects of lactate on metabolism and differentiation of CD4+T cells.Molecular Immunology.2023, 154: 96-107.