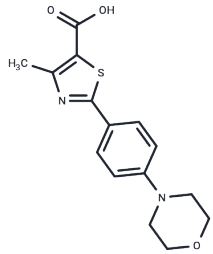
Data Sheet (Cat.No.T205607)

TargetMol

CIB-L43

Chemical Properties



CAS No. : 1082942-70-8

Formula: C15H16N2O3S

Molecular Weight: 304.36

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	CIB-L43 is a high affinity and orally available TRBP inhibitor (KD = 4.78 nM), which can effectively inhibit the biosynthesis of oncogenic miR-21, increase the expression of PTEN and Smad7, and block the AKT and TGF-β signaling pathways to inhibit the proliferation and migration of hepatocellular carcinoma (HCC) cells.
Targets(IC50)	PTEN,Akt,DNA/RNA Synthesis,TGF-beta/Smad
In vitro	CIB-L43, a 2-phenylthiazole-5-carboxylic acid derivative, binds TRBP with high affinity (KD = 4.78 nM) and disrupts the TRBP-Dicer interaction (IC_{50} = 2.34 μM). In hepatocellular carcinoma cells, CIB-L43 suppresses oncogenic miR-21 biosynthesis with nanomolar potency (EC_{50} = 0.66 nM), upregulates tumor suppressors PTEN and Smad7, inhibits AKT and TGF-β signaling, and significantly reduces cell proliferation and migration[1].
In vivo	In hepatocellular carcinoma mouse models, CIB-L43 showed favorable pharmacokinetics, including an oral bioavailability of 53.9%[1].

Solubility Information

Solubility	DMSO: 5 mg/mL (16.43 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2856 mL	16.4279 mL	32.8558 mL
5 mM	0.6571 mL	3.2856 mL	6.5712 mL
10 mM	0.3286 mL	1.6428 mL	3.2856 mL
50 mM	0.0657 mL	0.3286 mL	0.6571 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

Shi H, et al. Design, Synthesis, and Antitumor Activity Evaluation of 2-Phenylthiazole-5-Carboxylic Acid Derivatives Targeting Transactivation Response RNA-Binding Protein 2. J Med Chem. 2025 Jan 9;68(1):421-447.