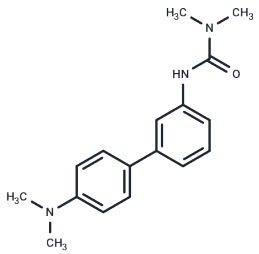
Data Sheet (Cat.No.T1875)

TargetMol

Atglistatin

Chemical Properties



CAS No. : 1469924-27-3

Formula: C17H21N3O

Molecular Weight: 283.37

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Atglistatin is a highly effective, specific and competitive ATGL inhibitor with an IC50 of ~0.7 μM for inhibition of lipolysis in vitro, and no toxicity when the concentration up to 50 μM.
Targets(IC50)	Lipase
In vitro	Atglistatin inhibits ATGL, consequently suppressing lipid breakdown in both cellular and organ cultures without exhibiting cytotoxic effects at concentrations up to 50 μM.
In vivo	Atglistatin, administered orally (p.o.), reduces fatty acids (FA) and glycerol by up to 50% and 62% respectively, in a dose-dependent manner, and also significantly reduces triglyceride (TG) levels in the plasma by 43%. When administered via intraperitoneal injection (i.p.), Atglistatin inhibits lipolysis in a dose- and time-dependent manner. Moreover, Atglistatin exhibits significant differences in tissue distribution, primarily accumulating in the liver and adipose tissue.
Kinase Assay	Determination of lipase activity: For determination of lipase activity, lysates are incubated with a substrate containing radiolabeled [9,10-3H(N)]-triolein. Subsequently, FA are extracted and quantitated by liquid scintilation counting. Data are presented as mean S.D. of triplicate determinations and representative for at least three independent experiments.
Cell Research	For MTT-based in vitro viability assays, cells are seeded in 96-well plates and cultured under standard conditions for 24 h. The next day, cells are pretreated with different concentrations of Atglistatin dissolved in DMSO or Cisplatin dissolved in DMF as positive control for 2 h. Medium is replaced by an identical fresh medium and incubated again for the indicated time points. Thereafter, cells are incubated for 3 h with 100 μL Thiazolyl Blue Tetrazolium Bromide (MTT). The resulting violet formazan crystals are dissolved by adding 100 μL of MTT solubilization solution (0.1% NP-40, 4 mM HCl and anhydrous isopropanol). After complete dissolution of the formazan product, absorbance is measured at 595 nm using 690 nm as reference wavelength.(Only for Reference)

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 45 mg/mL (158.8 mM),Sonication is recommended. Ethanol: 4 mg/mL (14.12 mM),Sonication is recommended.

(< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.529 mL	17.6448 mL	35.2896 mL
5 mM	0.7058 mL	3.529 mL	7.0579 mL
10 mM	0.3529 mL	1.7645 mL	3.529 mL
50 mM	0.0706 mL	0.3529 mL	0.7058 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.

Reference

Mayer N, et al. Nat Chem Biol. 2013, 9(12), 785-787.
Bottermann K, Kalfhues L, Nederlof R, et al. Cardiomyocyte p38 MAPKα suppresses a heart-adipose tissue-neutrophil crosstalk in heart failure development. Basic Research in Cardiology. 2022, 117(1): 1-21.
Li M, Yang J, Ye C, et al. Integrated Metabolomics and Transcriptomics Analyses Reveal Metabolic Landscape in Neuronal Cells during JEV Infection. Virologica Sinica. 2021: 1-12.
Zhang Q, Shen X, Yuan X, et al.Lipopolysaccharide binding protein resists hepatic oxidative stress by regulating lipid droplet homeostasis.Nature Communications.2024, 15(1): 3213.

Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481