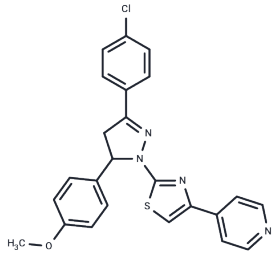
Data Sheet (Cat.No.T36316)

TargetMol
YOUR TARGET MOLECULES

mTOR inhibitor-8

Chemical Properties



CAS No. : 2489196-70-3

Formula: C24H19ClN4OS

Molecular Weight: 446.95

Appearance: no data available

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

Biological Description

Description	mTOR inhibitor-8 is a potent mTOR inhibitor and autophagy inducer with antiviral and antitumor activity. mTOR inhibitor-8 inhibits the growth of A549 cells, which can be used to study non-small cell lung cancer.
Targets(IC50)	mTOR,Autophagy
In vitro	mTOR inhibitor-8 (Compound 5e; 0.1-10μM) suppresses the growth of A549 cells in a dose-dependent manner after 24 and 48 hours of treatment[1]. mTOR inhibitor-8 induces autophagy in an mTOR-dependent manner. At a concentration of 10μM, mTOR inhibitor-8 induces autophagy in a time-dependent manner (3-24hours), leading to enhanced levels of LC3B-II[1].At a concentration of 10μM for 3-24hours, mTOR inhibitor-8 reduces the phosphorylation of RPS6KB1 (ribosomal protein S6 kinase) and EIF4EBP1 (eukaryotic translation initiation factor 4E-binding protein 1), two essential substrates of mTOR[1].
In vivo	In vivo, mTOR inhibitor-8 effectively inhibits tumor growth at concentrations of 25 and 50 μM for a duration of 6 days, without adversely affecting angiogenesis in the normal chick chorioallantoic membrane [1].

Solubility Information

Solubility	DMSO: 20 mg/mL (44.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2374 mL	11.1869 mL	22.3739 mL
5 mM	0.4475 mL	2.2374 mL	4.4748 mL
10 mM	0.2237 mL	1.1187 mL	2.2374 mL
50 mM	0.0447 mL	0.2237 mL	0.4475 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

ZhaoMin Lin, et al. Discovery of new fluorescent thiazole-pyrazoline derivatives as autophagy inducers by inhibiting mTOR activity in A549 human lung cancer cells. Cell Death Dis. 2020 Jul 20;11(7):551.