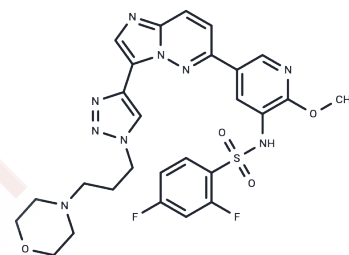


## PI3K/mTOR Inhibitor-12

## Chemical Properties

CAS No. :	2891692-83-2
Formula:	C <sub>27</sub> H <sub>27</sub> F <sub>2</sub> N <sub>9</sub> O <sub>4</sub> S
Molecular Weight:	611.62
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	PI3K/mTOR Inhibitor-12, a potent and selective orally active inhibitor, exhibits IC <sub>50</sub> values of 0.06 nM for PI3K $\alpha$ and 3.12 nM for mTOR, indicating significant antitumor activity with reduced liver toxicity [1].
Targets(IC <sub>50</sub> )	mTOR,PI3K
In vitro	PI3K/mTOR Inhibitor-12 (compound 48; 72 h) exhibits anticancer activity with IC <sub>50</sub> values of 0.07 $\mu$ M for PC-3, 0.09 $\mu$ M for HT-29, 0.54 $\mu$ M for both HCT116 and LOVO, and 0.68 $\mu$ M for HUVEC cells [1]. Additionally, at 0.25 to 1 $\mu$ M concentrations over 12 to 48 hours, it effectively suppresses PI3K and mTOR activation in HCT116 and HT-29 cells [1].
In vivo	PI3K/mTOR Inhibitor-12 (compound 48; 20 mg/kg; orally, daily for 14 days) effectively suppressed the growth of HCT116 tumor xenografts in female BALB/c nude mice [1]. In male SD rats, the inhibitor (1 and 5 mg/kg, intravenously and orally) showed rapid plasma clearance (1428 mL/h/kg), a short half-life (T <sub>1/2</sub> ) of 2.33 hours, and an AUC (0- $\infty$ ) of 1356 h·ng/mL [1].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.635 mL	8.175 mL	16.350 mL
5 mM	0.327 mL	1.635 mL	3.270 mL
10 mM	0.1635 mL	0.8175 mL	1.635 mL
50 mM	0.0327 mL	0.1635 mL	0.327 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.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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