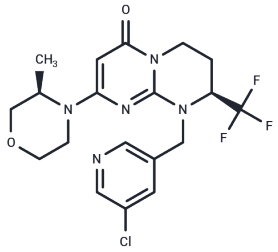
Data Sheet (Cat.No.T12831L)

TargetMol

SAR405

Chemical Properties



CAS No. : 1523406-39-4

Formula: C19H21ClF3N5O2

Molecular Weight: 443.85

Appearance: no data available

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

Biological Description

Description	SAR-405 is a potent and selective PIK3C3/Vps34 inhibitor (IC50:1.2 nM; Kd:1.5 nM) that prevents autophagy and synergizes with MTOR inhibition in tumor cells. SAR405 treatment also inhibits autophagy induced either by starvation or by MTOR (mechanistic target of rapamycin) inhibition. Combining SAR405 with everolimus results in a significant synergy on the reduction of cell proliferation using renal tumor cells.
Targets(IC50)	Autophagy,PI3K
In vitro	SAR405, a low molecular mass kinase inhibitor of PIK3C3, highly potent and selective with regard to other lipid and protein kinases. Inhibiting the catalytic activity of PIK3C3 disrupts vesicle trafficking from late endosomes to lysosomes. SAR405 treatment also inhibits autophagy induced either by starvation or by MTOR (mechanistic target of rapamycin) inhibition. SAR405 prevents autophagosome formation (IC50: 42 nM). Treatment of starved cells with SAR405 fully inhibits the conversion to LC3-II in a dose-dependent manner. The GFP-LC3 model is used for the HTS and confirmed its activity on starved cells (IC50=419 nM) [1][2].

Solubility Information

Solubility	DMSO: 27 mg/mL (60.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.253 mL	11.2651 mL	22.5301 mL
5 mM	0.4506 mL	2.253 mL	4.506 mL
10 mM	0.2253 mL	1.1265 mL	2.253 mL
50 mM	0.0451 mL	0.2253 mL	0.4506 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

Ronan B, et al. A highly potent and selective Vps34 inhibitor alters vesicle trafficking and autophagy. Nat Chem Biol. 2014 Dec;10(12):1013-9.

Liu Y, Sun Y, Xu Y, et al.Targeting VPS41 induces methuosis and inhibits autophagy in cancer cells.Cell Chemical Biology.2023

Pasquier B. SAR405, a PIK3C3/Vps34 inhibitor that prevents autophagy and synergizes with MTOR inhibition in tumor cells. Autophagy. 2015 Apr 3;11(4):725-6.

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