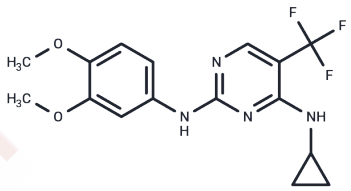
Data Sheet (Cat.No.T8850)

TargetMol

sbp-7455

Chemical Properties



CAS No. : 1884222-74-5

Formula: C16H17F3N4O2

Molecular Weight: 354.33

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	SBP-7455 potently inhibited ULK1/2 enzymatic activity in vitro and in cells, reduced the viability of TNBC cells and had oral bioavailability in mice.
Targets(IC50)	Autophagy
In vitro	SBP-7455 treatment inhibits cell growth with an IC50 of 0.3 μM for MDA-MB-468 cells. SBP-7455 inhibits starvation-induced autophagic flux in TNBC cells that are dependent on autophagy for survival[1].
In vivo	To evaluate the PD profile and in vivo target engagement, mice were dosed with SBP-7455 (10 mg/kg) or vehicle by oral gavage, and liver samples were collected after 2 h. Based on the PK and PD profiles, our data show that SBP-7455 is an efficacious tool that can be used to modulate autophagy in vivop[1].

Solubility Information

Solubility	DMSO: 120 mg/mL (338.67 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (11.29 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8222 mL	14.1111 mL	28.2223 mL
5 mM	0.5644 mL	2.8222 mL	5.6445 mL
10 mM	0.2822 mL	1.4111 mL	2.8222 mL
50 mM	0.0564 mL	0.2822 mL	0.5644 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

Ren H, Bakas NA, Vamos M, et al. Design, Synthesis, and Characterization of an Orally Active Dual-Specific ULK1/2 Autophagy Inhibitor that Synergizes with the PARP Inhibitor Olaparib for the Treatment of Triple-Negative Breast Cancer. J Med Chem. 2020;63(23):14609-14625. doi:10.1021/acs.jmedchem.0c00873

Fenton S E, Zannikou M, Ilut L, et al.Targeting ULK1 decreases interferon-γ-mediated resistance to immune checkpoint inhibitors.Molecular Cancer Research.2022

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