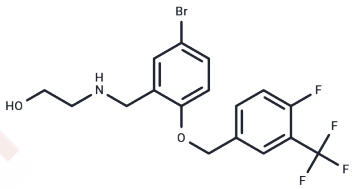
Data Sheet (Cat.No.T7685)

TargetMol

USP25/28 inhibitor AZ1

Chemical Properties



CAS No. : 2165322-94-9

Formula: C17H16BrF4NO2

Molecular Weight: 422.21

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	USP25/28 inhibitor AZ1 is a selective, orally active and non-competitive dual ubiquitin-specific protease USP25/28 inhibitor with IC50 of 0.7 μM and 0.6 μM, respectively, and exhibits anti-inflammatory and anti-tumor effects.
Targets(IC50)	DUB
In vitro	**METHODS**: HCT116 cells were treated with USP25/28 inhibitor AZ1 (20, 40, 60, 80, 100 μM) and samples were collected 3 hours later for Western blot analysis of USP28, c-Myc and PARP. **RESULTS** Western blot analysis showed that the total protein level of c-Myc decreased rapidly and concentration-dependently after treatment with USP25/28 inhibitor AZ1. [1]
In vivo	Method: USP25/28 inhibitor AZ1 (AZ1) (20, 40mg/kg, gavage) was given to WT Model mice were used to study the effect of USP25/28 inhibitor AZ1 (AZ1) on DSS-induced colitis. **RESULTS** USP25/28 inhibitor AZ1 (AZ1) treatment significantly reduced the number of colon tumors; the expression of wnt-related genes and pSTAT3 levels in tumors in the USP25/28 inhibitor AZ1 (AZ1) treatment group were reduced, and the SOCS3 level was increased; USP25/28 inhibitor Inflammation and bacterial replication were impaired in the colon of mice gavaged with AZ1 (AZ1), the expression of pro-inflammatory cytokines and antimicrobial peptides was enhanced, p-p65 and p-p38 levels were increased, and TRAF3 levels were decreased. [2]

Solubility Information

Solubility	DMSO: 250 mg/mL (592.12 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: 5 mg/mL (11.84 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	2.3685 mL	11.8424 mL	23.6849 mL
5 mM	0.4737 mL	2.3685 mL	4.737 mL
10 mM	0.2368 mL	1.1842 mL	2.3685 mL
50 mM	0.0474 mL	0.2368 mL	0.4737 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

Wrigley JD, et al. Identification and Characterization of Dual Inhibitors of the USP25/28 Deubiquitinating EnzymeSubfamily. ACS Chem Biol. 2017 Dec 15;12(12):3113-3125.
Wang XM, et al. The deubiquitinase USP25 supports colonic inflammation and bacterial infection and promotes colorectal cancer. Nat Cancer. 2020 Aug;1(8):811-825.