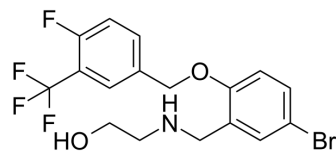


## USP25/28 inhibitor AZ1

<b>Cat. No.:</b>	HY-117370		
<b>CAS No.:</b>	2165322-94-9		
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>16</sub> BrF <sub>4</sub> NO <sub>2</sub>		
<b>Molecular Weight:</b>	422.21		
<b>Target:</b>	Deubiquitinase		
<b>Pathway:</b>	Cell Cycle/DNA Damage		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 250 mg/mL (592.12 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass		1 mg	5 mg	10 mg
	Concentration				
	1 mM		2.3685 mL	11.8424 mL	23.6849 mL
	5 mM		0.4737 mL	2.3685 mL	4.7370 mL
	10 mM		0.2368 mL	1.1842 mL	2.3685 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: corn oil  
Solubility: 25 mg/mL (59.21 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (4.93 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: 2.08 mg/mL (4.93 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (4.93 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

USP25/28 inhibitor AZ1 (AZ1) is an orally active, selective, noncompetitive, dual ubiquitin specific protease (USP) 25/28 inhibitor with IC<sub>50</sub>s of 0.7 μM and 0.6 μM, respectively. USP25/28 inhibitor AZ1 attenuates colitis and tumorigenesis in the mice model<sup>[1][2]</sup>.

<b>IC<sub>50</sub> &amp; Target</b>	IC50: 0.7 μM (USP25) and 0.6 μM (USP28) <sup>[1]</sup>
<b>In Vivo</b>	<p>USP25/28 inhibitor AZ1 (AZ1; 40 mg/kg; gavage; daily; for 7 days) protects from dextran sulfate sodium (DSS)-induced weight loss and diarrhea and impaired colon shortening<sup>[1]</sup>.</p> <p>USP25/28 inhibitor AZ1 (20 mg/kg/day; gavage; 6 times a week in the 1, 3, 6 weeks) treatment significantly reduces tumor numbers in colons. Expression of Wnt-related genes and levels of pSTAT3 are decreased and levels of SOCS3 are increased in tumors. AZ1 gavage does not alleviate DSS-induced colitis in Usp25<sup>-/-</sup> mice or the spontaneous colitis of Il10<sup>-/-</sup> mice<sup>[1]</sup>.</p> <p>USP25/28 inhibitor AZ1 (20 mg/kg/day; gavage; every 3 days from 13-20 weeks) significantly inhibits tumorigenesis in the colon and prolonged the survival of AOM/Vil-Cre;Trp53<sup>fl/fl</sup> (VP) mice. AZ1 treatment has minimal effect on tumorigenesis in the USP25-deficient background<sup>[1]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>Animal Model:</b>	12-week old male Usp25 <sup>+/+</sup> and Usp25 <sup>-/-</sup> mice <sup>[1]</sup>
<b>Dosage:</b>	40 mg/kg
<b>Administration:</b>	Gavage; daily; for 7 days
<b>Result:</b>	Protected from dextran sulfate sodium (DSS)-induced weight loss and diarrhea and impaired colon shortening and potentiated the expression of proinflammatory cytokines and antibacterial peptides in colons of Usp25 <sup>-/-</sup> mice compared to control counterparts.

## CUSTOMER VALIDATION

- Biochem Pharmacol. 2022 Nov 25;115355.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. 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.

[2]. Xiao-Meng Wang, et al. The deubiquitinase USP25 supports colonic inflammation and bacterial infection and promotes colorectal cancer. Nature Cancer volume 1, pages811–825(2020).

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA