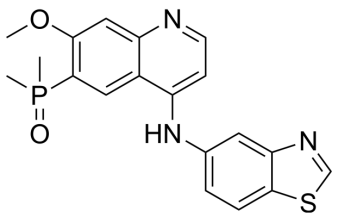
Zharp2-1

Cat. No.:	HY-155782		
CAS No.:	2772600-18-5		
Molecular Formula:	$C_{19}H_{18}N_3O_2PS$		
Molecular Weight:	383.4		
Target:	RIP kinase		
Pathway:	Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (13.04 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6082 mL	13.0412 mL	26.0824 mL
	5 mM	0.5216 mL	2.6082 mL	5.2165 mL
	10 mM	0.2608 mL	1.3041 mL	2.6082 mL

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

BIOLOGICAL ACTIVITY

Description

Zharp2-1 is an oral effective RIPK2 inhibitor, highly associated with inflammatory bowel disease (IBD). Zharp2-1 blocker muramyl dipeptide (MDP) induces growth of mononuclear cells and induces inflammatory cell factor infection. Zharp2-1 attenuates MDP-induced small inguinal peritonitis, or ameliorates by DNBS-induced large inguinal conjunctivitis[1].

IC_{50} & Target

RIPK2[1]

In Vitro

Zharp2-1 pretreats THP-1 and iBMDM cells for 2 h, and inhibits the release of IL-6 and TNF-α induced by 10 μg/mL MDP or 1 μg/mL L18-MDP for 12 h[1].

Zharp2-1 significantly inhibits MDP-induced cytokine release in PBMCs, with an IC_{50} of 0.8 nM for IL-8, 8.7 nM for IL-6 and 11.9 nM for TNF-α[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Zharp2-1 (15 mg/kg; gavage; once daily for 6 days) protects rats from DNBS-induced colon shortening and colon weight gain, protects rats against DNBS-induced diarrhea. Zharp2-1 significantly ameliorates colonic mucosal structural disruption, muscle thickening and inflammatory infiltration[1].

Pharmacokinetic Analysis[1]

	Route	Dose (mg/kg)	$T_{1/2}$ (h)	T_{max} (h)	C_{max} (ng·h/mL)	AUC (ng·h/mL)	V_d (L/kg)	Cl (mL/kg/min)	F (%)
Mouse	iv	2	1.2			2989	1.1	11.1	
	po	10		0.5	9610	19,236			129
Rat	iv	2	1.7			7889	0.6	4.2	
	po	10		3.3	3323	18,803			48
Dog	iv	1	2.1			1645	1.7	9.5	
	po	5		0.7	2192	10,800			131

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Lai Y, et al. Discovery of a novel RIPK2 inhibitor for the treatment of inflammatory bowel disease. Biochem Pharmacol. 2023 Aug;214:115647.

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