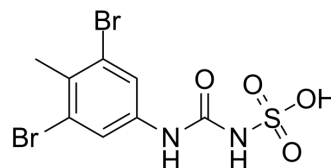


## SPAA-52

Cat. No.:	HY-151591		
CAS No.:	2837000-75-4		
Molecular Formula:	C <sub>8</sub> H <sub>8</sub> Br <sub>2</sub> N <sub>2</sub> O <sub>4</sub> S		
Molecular Weight:	388.03		
Target:	Phosphatase		
Pathway:	Metabolic Enzyme/Protease		
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 : 100 mg/mL (257.71 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.5771 mL	12.8856 mL	25.7712 mL
	5 mM	0.5154 mL	2.5771 mL	5.1542 mL
	10 mM	0.2577 mL	1.2886 mL	2.5771 mL

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

### BIOLOGICAL ACTIVITY

#### Description

SPAA-52 is an orally active, competitive and reversible low-molecular-weight protein tyrosine phosphatase (LMW-PTP) inhibitor (IC<sub>50</sub>=4 nM, K<sub>i</sub>=1.2 nM). SPAA-52 can be used in diabetes research<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

IC<sub>50</sub>: 4 nM (LMW-PTP)<sup>[1]</sup>

#### In Vivo

Plasma PK Parameters in Healthy Mice<sup>[1]</sup>

Compound	SPAA-52	
dose route	2 mg/kg IV	10 mg/kg PO
AUC (0–8 h) (nM h)	15,100	37,300

C <sub>0</sub> or C <sub>max</sub> (nM)	13,400	9690
C <sub>0</sub> or C <sub>max</sub> unbound (nM)	332	233
Vd <sub>ss</sub> (L/kg)	0.42	
CL (mL/min/kg)	5.65	
T <sub>1/2</sub> (h)	1.41	4.2
F (%)		34

Plasma PK Parameters in Healthy Rats<sup>[1]</sup>

Compound	SPAA-52
dose route	3 mg/kg PO
AUC (0-12 h) (nM h)	4660
C <sub>max</sub> (nM)	877
C <sub>max</sub> unbound (nM)	21
Vd <sub>ss</sub> (L/kg)	0.42
T <sub>max</sub> (h)	2.0
T <sub>1/2</sub> (h)	2.4

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

## REFERENCES

[1]. He R, et al. Structure-Based Design of Active-Site-Directed, Highly Potent, Selective, and Orally Bioavailable Low-Molecular-Weight Protein Tyrosine Phosphatase Inhibitors. J Med Chem. 2022 Oct 5.

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

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