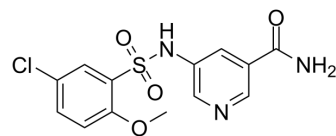


## SBI-425

<b>Cat. No.:</b>	HY-124756		
<b>CAS No.:</b>	1451272-71-1		
<b>Molecular Formula:</b>	C <sub>13</sub> H <sub>12</sub> ClN <sub>3</sub> O <sub>4</sub> S		
<b>Molecular Weight:</b>	341.77		
<b>Target:</b>	Phosphatase		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



## SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 86.67 mg/mL (253.59 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.9259 mL	14.6297 mL	29.2594 mL
		5 mM	0.5852 mL	2.9259 mL	5.8519 mL
10 mM		0.2926 mL	1.4630 mL	2.9259 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.17 mg/mL (6.35 mM); Clear solution				

## BIOLOGICAL ACTIVITY

<b>Description</b>	SBI-425 is an orally active and potent TNAP (tissue-nonspecific alkaline phosphatase) inhibitor (IC <sub>50</sub> =16 nM). SBI-425 inhibits TNAP in the vasculature, improving cardiovascular parameters and survival <sup>[1][2]</sup> .		
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 16 nM (TNAP) <sup>[1]</sup>		
<b>In Vitro</b>	SBI-425 treatment suppresses Foxp3 expression in CD4 <sup>+</sup> and CD8 <sup>+</sup> T cells in splenocytes from CLP-injured mice <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.		
<b>In Vivo</b>	Mouse PK parameters for SBI-425 <sup>[1]</sup> <table border="1" style="margin-left: 20px;"> <tr> <td>Comps</td> <td>SBI-425</td> </tr> </table>	Comps	SBI-425
Comps	SBI-425		

Cl<sub>p</sub> (mL/min/kg) 5.14

Vd (L/kg) 1.03

C<sub>max</sub> (µg/mL) 178

AUC (µg\*hr/mL) 848

t<sub>1/2</sub> (hr) 2.3

%F 58

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

## CUSTOMER VALIDATION

- bioRxiv. January 17, 2022.

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

## REFERENCES

- [1]. Brichacek AL, et al. Systemic inhibition of tissue-nonspecific alkaline phosphatase alters the brain-immune axis in experimental sepsis. *Sci Rep.* 2019 Dec 11;9(1):18788.
- [2]. Pinkerton AB, et al. Discovery of 5-((5-chloro-2-methoxyphenyl)sulfonamido)nicotinamide (SBI-425), a potent and orally bioavailable tissue-nonspecific alkaline phosphatase (TNAP) inhibitor. *Bioorg Med Chem Lett.* 2018 Jan 1;28(1):31-34.
- [3]. Sheen CR, et al. Pathophysiological role of vascular smooth muscle alkaline phosphatase in medial artery calcification. *J Bone Miner Res.* 2015 May;30(5):824-36.

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

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