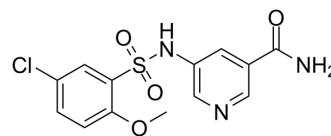


## SBI-425

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



## SOLVENT & SOLUBILITY

In Vitro	DMSO : 86.67 mg/mL (253.59 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	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.					
In Vivo	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

Description	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> .	
IC <sub>50</sub> & Target	IC <sub>50</sub> : 16 nM (TNAP) <sup>[1]</sup>	
In Vitro	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.	
In Vivo	Mouse PK parameters for SBI-425 <sup>[1]</sup>	
	<table> <tr> <td>Comps</td> <td>SBI-425</td> </tr> </table>	Comps
Comps	SBI-425	

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Cl <sub>p</sub> (mL/min/kg)	5.14
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Vd (L/kg)	1.03
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C <sub>max</sub> (µg/mL)	178
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AUC (µg*hr/mL)	848
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t <sub>1/2</sub> (hr)	2.3
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%F	58
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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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