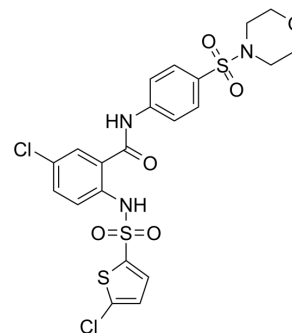


Ataciguat

Cat. No.:	HY-17500
CAS No.:	254877-67-3
Molecular Formula:	C ₂₁ H ₁₉ Cl ₂ N ₃ O ₆ S ₃
Molecular Weight:	576.49
Target:	Guanylate Cyclase
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (173.46 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	1.7346 mL	8.6732 mL	17.3464 mL
				5 mM	0.3469 mL	1.7346 mL	3.4693 mL
				10 mM	0.1735 mL	0.8673 mL	1.7346 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: ≥ 2.5 mg/mL (4.34 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (4.34 mM); Clear solution						

BIOLOGICAL ACTIVITY

Description	Ataciguat (HMR-1766) is a nitric oxide-independent soluble guanylate cyclase (sGC) activator. Ataciguat is able to activate the ferric heme-iron redox form of sGC that stimulate the production of cyclic GMP (cGMP). Ataciguat exhibits vasodilator effects ^{[1][2][3]} .
IC ₅₀ & Target	soluble guanylate cyclase ^[1]
In Vitro	Ataciguat (1-100 μM) induces the relaxation in aortic rings or coronary rings ^[2] . Ataciguat (0.1-10 μM; 30 min) increases NO production in HUVEC cells ^[2] . Ataciguat (1 nM-100 μM) induces concentration-dependent relaxations in sphincter of Oddi (SO) rings pre-contracted by Carbachol ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Schindler U, et, al. Biochemistry and pharmacology of novel anthranilic acid derivatives activating heme-oxidized soluble guanylyl cyclase. Mol Pharmacol. 2006 Apr;69(4):1260-8.
- [2]. Martinelli AM, et, al. In Endothelial Cells, the Activation or Stimulation of Soluble Guanylyl Cyclase Induces the Nitric Oxide Production by a Mechanism Dependent of Nitric Oxide Synthase Activation. J Pharm Pharm Sci. 2018;21(1):38-45.
- [3]. Çakmak E, et, al. Comparative Relaxant Effects of Atacigat and Zaprinast on Sheep Sphincter of Oddi. Balkan Med J. 2016 Jul;33(4):453-7.
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Caution: Product has not been fully validated for medical applications. For research use only.

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