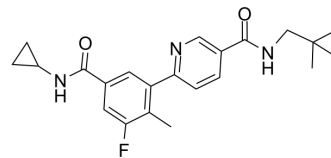


## Losmapimod

<b>Cat. No.:</b>	HY-10402		
<b>CAS No.:</b>	585543-15-3		
<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>26</sub> FN <sub>3</sub> O <sub>2</sub>		
<b>Molecular Weight:</b>	383.46		
<b>Target:</b>	p38 MAPK; Autophagy		
<b>Pathway:</b>	MAPK/ERK Pathway; Autophagy		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

Ethanol : 33.33 mg/mL (86.92 mM; Need ultrasonic)  
 DMSO : 27.5 mg/mL (71.72 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		2.6078 mL	13.0392 mL	26.0783 mL
	5 mM		0.5216 mL	2.6078 mL	5.2157 mL
	10 mM		0.2608 mL	1.3039 mL	2.6078 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: 2.75 mg/mL (7.17 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: 2.75 mg/mL (7.17 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.75 mg/mL (7.17 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)  
 Solubility: 2.5 mg/mL (6.52 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% EtOH >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (6.52 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Losmapimod (GSK-AHAB) is a selective, potent, and orally active p38 MAPK inhibitor with pK<sub>s</sub> of 8.1 and 7.6 for p38α and p38β, respectively<sup>[1]</sup>.

<b>IC<sub>50</sub> &amp; Target</b>	pKi: 8.1 (p38α), 7.6 (p38β)
<b>In Vivo</b>	In the spontaneously hypertensive stroke-prone rat (SHR-SP), chronic treatment with GSK-AHAB significantly and dose-dependently improves survival, endothelial-dependent and -independent vascular relaxation, and indices of renal function, and it attenuates dyslipidemia, hypertension, cardiac remodeling, plasma renin activity (PRA), aldosterone, and interleukin-1β (IL-1β) <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## PROTOCOL

### Animal Administration <sup>[1]</sup>

Male SHR-SPs (n=70) are randomly assigned according to body weight into five groups (n=14 per group): normal diet controls (ND), high salt-fat diet controls (SFD), SFD + GSK-AHAB (1.2 mg/kg/day), and SFD + GSK-AHAB (12 mg/kg/day) and SFD + MK 966 (18 mg/kg/day). All drugs are administered in the diet by mixing with the SFD. A subgroup of animals from each group (n=6 per group) are anesthetized and surgically instrumented with radiotelemetry units for the conscious measurement of mean arterial blood pressure and heart rate. These animals are allowed to recover for at least 7 days before the start of the study.

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

## CUSTOMER VALIDATION

- J Exp Clin Cancer Res. 2023 Jul 13;42(1):166.
- EMBO Mol Med. 2023 Jan 18;e16235.
- EBioMedicine. 2018 Feb;28:51-61.
- Cell Syst. 2018 Apr 25;6(4):424-443.e7.
- Cell Mol Life Sci. 2022 Aug 5;79(8):467.

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

## REFERENCES

[1]. Willette RN, et al. Differential effects of p38 mitogen-activated protein kinase and cyclooxygenase 2 inhibitors in a model of cardiovascular disease. J Pharmacol Exp Ther. 2009 Sep;330(3):964-70.

[2]. Zhang XM, et al. Suppression of mitochondrial fission in experimental cerebral ischemia: The potential neuroprotective target of p38 MAPK inhibition. Neurochem Int. 2015 Nov;90:1-8.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA