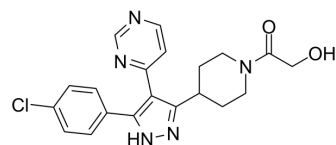


SD 0006

Cat. No.:	HY-11087		
CAS No.:	271576-80-8		
Molecular Formula:	C ₂₀ H ₂₀ ClN ₅ O ₂		
Molecular Weight:	397.86		
Target:	p38 MAPK; Autophagy		
Pathway:	MAPK/ERK Pathway; Autophagy		
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 : 50 mg/mL (125.67 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.5134 mL	12.5672 mL	25.1345 mL
	5 mM	0.5027 mL	2.5134 mL	5.0269 mL
	10 mM	0.2513 mL	1.2567 mL	2.5134 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: ≥ 2.5 mg/mL (6.28 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (6.28 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (6.28 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SD 0006 (SD-06) is an orally active, selective, ATP-competitive and potent diaryl pyrazole inhibitor of p38α MAP kinase, with an IC₅₀ of 110 nM for p38α^{[1][2]}.

IC₅₀ & Target

IC₅₀: 110 nM (p38 MAPK)^[1].

In Vitro

SD 0006 clearly inhibits p38α as shown by the dose-dependent inhibition of phosphorylation of its endogenous Hsp27 substrate^[1].

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

In Vivo

SD 0006 (0-30 mg/kg) may be an effective alternative to steroids and biologics for RA therapy^[1].
SD0006 (3.75, 7.5 and 15 mg/kg; p.o.; b.i.d.) is highly effective in attenuating SCW-induced inflammation as shown by the dose-dependent inhibition of paw swelling^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	8- to 12-week-old DBA/1 mice ^[1] .
Dosage:	3.75, 7.5 and 15 mg/kg.
Administration:	Orally twice daily.
Result:	Inhibited the transcription of several inflammatory mediators to prevent joint swelling and bone destruction and to preserve bone density.

REFERENCES

- [1]. Burnette BL, et al. SD0006: a potent, selective and orally available inhibitor of p38 kinase. *Pharmacology*. 2009;84(1):42-60.
- [2]. Walker JK, et al. Identification of SD-0006, a potent diaryl pyrazole inhibitor of p38 MAP kinase. *Bioorg Med Chem Lett*. 2010 Apr 15;20(8):2634-8.

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

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