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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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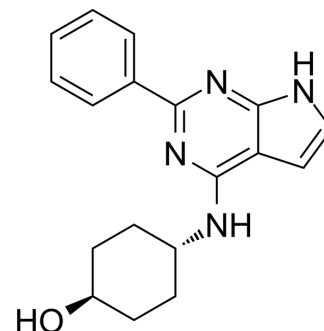
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Derenofylline

Cat. No.:	HY-14858		
CAS No.:	251945-92-3		
Molecular Formula:	C ₁₈ H ₂₀ N ₄ O		
Molecular Weight:	308.38		
Target:	Adenosine Receptor		
Pathway:	GPCR/G Protein		
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 : 100 mg/mL (324.28 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM		3.2428 mL	16.2138 mL	32.4275 mL
		5 mM		0.6486 mL	3.2428 mL	6.4855 mL
		10 mM		0.3243 mL	1.6214 mL	3.2428 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: ≥ 6.25 mg/mL (20.27 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 6.25 mg/mL (20.27 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 6.25 mg/mL (20.27 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Derenofylline (SLV 320) is a potent, selective and orally active adenosine A ₁ receptor antagonist, with K _i values of 1 nM, 200 nM and 398 nM for human A ₁ , A ₃ and A _{2A} receptors respectively. Derenofylline suppresses cardiac fibrosis and attenuates albuminuria without affecting blood pressure in rats ^[1] .		
IC ₅₀ & Target	A1R 1 nM (K _i)	Adenosine A ₃ receptor 200 nM (K _i)	A2AR 398 nM (K _i)

In Vitro	Derenofylline (100 μM, 72 h) inhibits TGF-β1-induced myofibroblast transformation without affecting the cell viability ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Derenofylline (0.3-10 mg/kg, oral administration) suppresses adenosine-induced bradycardia in rats ^[1] . Derenofylline (10 mg/kg/d, oral administration, 12 weeks) reduces myocardial fibrosis in 5/6 nephrectomy rats without affecting blood pressure ^[1] . Derenofylline (0.1-5mg/kg, intravenous injection) causes no major haemodynamic effects (heart rate and blood pressure) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	5/6 nephrectomy rats ^[1]
	Dosage:	10 mg/kg/d
	Administration:	Oral administration, mixed with food for 12 weeks
	Result:	Attenuated urinary albuminuria by about 50%. Suppressed the increase in CK levels, ALT and AST plasma levels in nephrectomized animals.

REFERENCES

- [1]. Marta Mateus, et al. Understanding the Role of Adenosine Receptors in the Myofibroblast Transformation in Peyronie's Disease. J Sex Med. 2018 Jul;15(7):947-957.
- [2]. Kalk P, et al. The adenosine A1 receptor antagonist SLV320 reduces myocardial fibrosis in rats with 5/6 nephrectomy without affecting blood pressure. Br J Pharmacol. 2007 Aug;151(7):1025-32.

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

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