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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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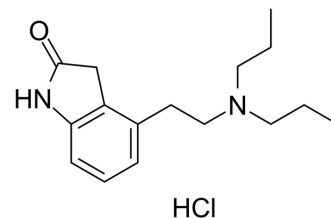
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Ropinirole hydrochloride

Cat. No.:	HY-B0623A
CAS No.:	91374-20-8
Molecular Formula:	C ₁₆ H ₂₅ ClN ₂ O
Molecular Weight:	297
Target:	Dopamine Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 100 mg/mL (336.70 mM; Need ultrasonic) DMSO : 16.67 mg/mL (56.13 mM; Need ultrasonic)				
	Preparing Stock Solutions	Solvent Concentration Mass	1 mg	5 mg	10 mg
		1 mM	3.3670 mL	16.8350 mL	33.6700 mL
		5 mM	0.6734 mL	3.3670 mL	6.7340 mL
		10 mM	0.3367 mL	1.6835 mL	3.3670 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (336.70 mM); Clear solution; Need ultrasonic				
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1.67 mg/mL (5.62 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.67 mg/mL (5.62 mM); Clear solution				
	4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.67 mg/mL (5.62 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Ropinirole (SKF 101468) hydrochloride is an orally active, potent D ₃ /D ₂ receptor agonist with a K _i of 29 nM for D ₂ receptor. Ropinirole hydrochloride has pEC ₅₀ s of 7.4, 8.4 and 6.8 for hD ₂ , hD ₃ and hD ₄ receptors, respectively. Ropinirole hydrochloride has no affinity for the D ₁ receptors. Ropinirole hydrochloride has the potential for Parkinson's disease ^{[1][2]} .			
IC ₅₀ & Target	D ₂ Receptor 29 nM (K _i)	hD ₂ Receptor 7.4 (pEC ₅₀)	hD ₃ Receptor 8.4 (pEC ₅₀)	hD _{4.4} Receptor 6.8 (pEC ₅₀)

In Vitro	Ropinirole hydrochloride has affinity for D₃ receptors of 10-20 fold higher than the D₂ and D₄ receptors. Ropinirole hydrochloride is weakly active at alpha 2-adrenoceptors and 5-HT₂ receptors but inactive at 5-HT₁, benzodiazepine and gamma-aminobutyric acid receptors or alpha 1 and beta-adrenoceptors^{[1][2]}. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Ropinirole (0.1-10 mg/kg; i.p.) decreases intracranial self-stimulation (ICSS) thresholds and induces anxiolytic- and antidepressive-like effects without affecting motor activity or spatial memory^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Male Sprague–Dawley rats weighing 220-350 g ^[2]
	Dosage:	0.1, 1 or 10 mg/kg
	Administration:	i.p.
	Result:	Decreased ICSS thresholds and induced anxiolytic- and antidepressive-like effects without affecting motor activity or spatial memory.

REFERENCES

- [1]. Eden, R.J., et al., Preclinical pharmacology of ropinirole (SK&F 101468-A) a novel dopamine D2 agonist. *Pharmacol Biochem Behav*, 1991. 38(1): p. 147-54.
- [2]. Mavrikaki M, et al. Ropinirole regulates emotionality and neuronal activity markers in the limbic forebrain. *Int J Neuropsychopharmacol*. 2014 Dec;17(12):1981-93.

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

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