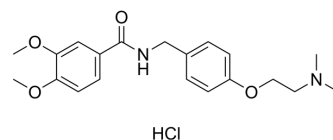


Itopride hydrochloride

Cat. No.:	HY-B0732
CAS No.:	122892-31-3
Molecular Formula:	C ₂₀ H ₂₇ ClN ₂ O ₄
Molecular Weight:	394.89
Target:	Cholinesterase (ChE); Dopamine Receptor; Bacterial
Pathway:	Neuronal Signaling; GPCR/G Protein; Anti-infection
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	DMSO : 100 mg/mL (253.24 mM; Need ultrasonic)				
	H ₂ O : 50 mg/mL (126.62 mM; Need ultrasonic)				
	Preparing Stock Solutions	<div>Solvent Concentration</div> <div>Mass</div>	1 mg	5 mg	10 mg
		1 mM	2.5324 mL	12.6618 mL	25.3235 mL
		5 mM	0.5065 mL	2.5324 mL	5.0647 mL
10 mM		0.2532 mL	1.2662 mL	2.5324 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 (253.24 mM); Clear solution; Need ultrasonic				
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.33 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.33 mM); Clear solution				
	4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.33 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Itopride (HSR803) hydrochloride is a potent dopamine-2 antagonist and an acetylcholine esterase (AChE) inhibitor. Itopride hydrochloride enhances gastric motility through both antidopaminergic and anti-acetylcholinesterasic actions, can be used as a gastrointestinal prokinetic agent. Itopride can be used for researching gastro-esophageal reflux disease (GERD) ^{[1][2]} .	
IC ₅₀ & Target	D ₂ Receptor	AChE

In Vitro	<p>Itopride hydrochloride has prokinetic effects on both the ileum and colon, which are regulated through inhibitory effects on AChE and antagonistic effects on dopamine D2 receptor^[3].</p> <p>Itopride hydrochloride (0.1 nM-1 μM) significantly accelerates the propagation velocity of the peristalsis in ex guinea pig ileum ^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>																
In Vivo	<p>Itopride hydrochloride (30 mg/kg; p.o.) significantly accelerates gastric emptying compared with the vehicle group^[4].</p> <p>Itopride hydrochloride (30 mg/kg; p.o.) displays C_{max} of 358 %, T_{1/2} of 24.9 min^[4].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" data-bbox="347 449 1516 684"> <tr> <td>Animal Model:</td><td>Male ddY-strain mice (23.7-28.5 g)^[2]</td></tr> <tr> <td>Dosage:</td><td>3 mg/kg, 10 mg/kg, 30 mg/kg</td></tr> <tr> <td>Administration:</td><td>Oral administration</td></tr> <tr> <td>Result:</td><td>Accelerated gastric emptying at 30 mg/kg dose.</td></tr> </table> <table border="1" data-bbox="347 722 1516 957"> <tr> <td>Animal Model:</td><td>Male ddY-strain mice (23.7-28.5 g)^[2]</td></tr> <tr> <td>Dosage:</td><td>3 mg/kg, 10 mg/kg, 30 mg/kg (Pharmacokinetic Analysis)</td></tr> <tr> <td>Administration:</td><td>Oral administration</td></tr> <tr> <td>Result:</td><td>C_{max} (358 %), T_{1/2} (24.9 min) at 30 mg/kg dose.</td></tr> </table>	Animal Model:	Male ddY-strain mice (23.7-28.5 g) ^[2]	Dosage:	3 mg/kg, 10 mg/kg, 30 mg/kg	Administration:	Oral administration	Result:	Accelerated gastric emptying at 30 mg/kg dose.	Animal Model:	Male ddY-strain mice (23.7-28.5 g) ^[2]	Dosage:	3 mg/kg, 10 mg/kg, 30 mg/kg (Pharmacokinetic Analysis)	Administration:	Oral administration	Result:	C _{max} (358 %), T _{1/2} (24.9 min) at 30 mg/kg dose.
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REFERENCES

- [1]. Iwanaga Y, et al. A novel water-soluble dopamine-2 antagonist with anticholinesterase activity in gastrointestinal motor activity. Comparison with domperidone and neostigmine. Gastroenterology. 1990 Aug;99(2):401-8.
- [2]. Kim YS, et al. Effect of itopride, a new prokinetic, in patients with mild GERD: a pilot study. World J Gastroenterol. 2005 Jul 21;11(27):4210-4.
- [3]. Hyun Chul Lim, et al. Effect of Itopride Hydrochloride on the Ileal and Colonic Motility in Guinea Pig In Vitro. Effect of Itopride Hydrochloride on the Ileal and Colonic Motility in Guinea Pig In Vitro. Yonsei Med J. 2008 Jun 30;49(3):472-8.
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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