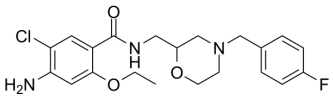
Mosapride

Cat. No.:	HY-B0189
CAS No.:	112885-41-3
Molecular Formula:	$C_{21}H_{25}ClFN_3O_3$
Molecular Weight:	421.89
Target:	5-HT Receptor; Cytochrome P450; Potassium Channel
Pathway:	GPCR/G Protein; Neuronal Signaling; Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Mosapride citrate is an orally active gastroenterokinetic compound. Mosapride citrate is a 5HT4agonist. Mosapride citrate is a CYP inducer. Mosapride citrate has a concentration-dependent inhibitory effect on Kv4.3, and its IC_{50} value is 15.2 μM. Mosapride citrate can be used in the study of gastrointestinal diseases[1][2][3][4][5][6][7].
IC_{50} & Target	5-HT_4 Receptor
In Vitro	Mosapride citrate (1-100 nM) significantly increases the average amplitude of proximal and distal colon contraction, and shortens the transport time of proximal and distal colon in guinea-pig[3]. Mosapride citrate (869 ng/mL, 48 h) increases the induction ability of Cytochrome P450 (CYP1A2, 2B6 and 3A4) in human hepatocytes (HMC424, 478 and 493)[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Mosapride citrate (0.3-3 mg/kg or 30 mg/kg p.o) promotes gastric empting rats in a dose-dependent manner. Gastric emptying was significantly inhibited when the dose was 30 mg/kg[5]. Mosapride citrate (0.5 mg/kg p.o) can relieve NSAIDS induced ulcer by activating 5-HT4 receptor in rats[6]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	NSAID-induced experimental ulcer model
Dosage:	0.25, 0.5 , 0.75 mg/kg
Administration:	p.o
Result:	Inhibited the mucosal damage.

CUSTOMER VALIDATION

- J Appl Microbiol. 2023 Jul 22;lxad153.
- Chin J Integr Med. 2022 Aug 31.

- Drug Metab Pharmacokinet. 2020 Feb;35(1):102-110.

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REFERENCES

[1]. Kim HS, et al. The effect of mosapride citrate on proximal and distal colonic motor function in the guinea-pig in vitro. Neurogastroenterol Motil. 2008 Feb;20(2):169-76.

[2]. Kim YH, et al. Measurement of Human Cytochrome P450 Enzyme Induction Based on Mesalazine and Mosapride Citrate Treatments Using a Luminescent Assay. Biomol Ther (Seoul). 2015 Sep;23(5):486-92.

[3]. Uchida M, et al. Dual role of mosapride citrate hydrate on the gastric emptying evaluated by the breath test in conscious rats. J Pharmacol Sci. 2013;121(4):282-7.

[4]. Fujisawa M, et al. The 5-HT4 receptor agonist mosapride attenuates NSAID-induced gastric mucosal damage. J Gastroenterol. 2010 Feb;45(2):179-86.

[5]. Sung KW, et al. Effect of mosapride on Kv4.3 potassium channels expressed in CHO cells. Naunyn Schmiedebergs Arch Pharmacol. 2013 Oct;386(10):905-16.

[6]. Tack J, et al. Systematic review: cardiovascular safety profile of 5-HT(4) agonists developed for gastrointestinal disorders. Aliment Pharmacol Ther. 2012 Apr;35(7):745-67.

[7]. Curran MP, et al. Mosapride in gastrointestinal disorders. Drugs. 2008;68(7):981-91.

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