

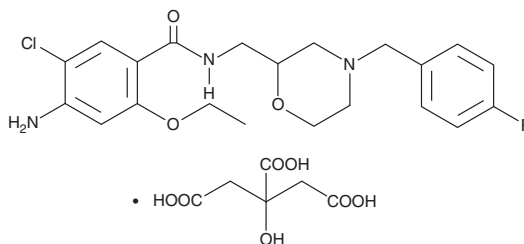
# PRODUCT INFORMATION



## Mosapride (citrate)

Item No. 30048

**CAS Registry No.:** 112885-42-4  
**Formal Name:** 4-amino-5-chloro-2-ethoxy-N-[[4-[(4-fluorophenyl)methyl]-2-morpholinyl]methyl]-benzamide, 2-hydroxy-1,2,3-monopropanetricarboxylate  
**Synonym:** AS-4370  
**MF:** C<sub>21</sub>H<sub>25</sub>ClFN<sub>3</sub>O<sub>3</sub> • C<sub>6</sub>H<sub>8</sub>O<sub>7</sub>  
**FW:** 614.0  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 212, 232, 274, 309 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Mosapride (citrate) is supplied as a solid. A stock solution may be made by dissolving the mosapride (citrate) in the solvent of choice, which should be purged with an inert gas. Mosapride (citrate) is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of mosapride (citrate) in these solvents is approximately 15 and 20 mg/ml, respectively.

Mosapride (citrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, mosapride (citrate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Mosapride (citrate) has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Mosapride is an agonist of the serotonin (5-HT) receptor subtype 5-HT<sub>4</sub> (K<sub>i</sub> = 69.9 nM).<sup>1,2</sup> It is selective for 5-HT<sub>4</sub> over 5-HT<sub>1</sub>, 5-HT<sub>2</sub>, dopamine D<sub>2</sub>, and α<sub>1</sub>- and α<sub>2</sub>-adrenergic receptors but acts as a partial antagonist at 5-HT<sub>3</sub> (K<sub>i</sub> = 1,189 nM).<sup>1,2</sup> It induces relaxation of precontracted rat esophageal thoracic muscularis mucosa preparations and enhances electrically evoked contractions in isolated guinea pig ileum (EC<sub>50</sub>s = 208.4 and 73.2 nM, respectively).<sup>3</sup> Mosapride (0.5 and 1 mg/kg, i.v.) increases antral and duodenal, but not ileal or colonic, motility in conscious dogs.<sup>1</sup> It also increases gastric emptying in rats when administered at doses ranging from 0.03 to 30 mg/kg.

### References

1. Yoshida, N., Omoya, H., Oka, M., *et al.* AS-4370, a novel gastrokinetic agent free of dopamine D2 receptor antagonist properties. *Arch. Int. Pharmacodyn. Ther.* **300**, 51-67 (1989).
2. Hirokawa, Y., Fujiwara, I., Suzuki, K., *et al.* Synthesis and structure-affinity relationships of novel N-(1-ethyl-4-methylhexahydro-1,4-diazepin-6-yl)pyridine-3-carboxamides with potent serotonin 5-HT<sub>3</sub> and dopamine D<sub>2</sub> receptor antagonistic activity. *J. Med. Chem.* **46(5)**, 702-715 (2003).
3. Mine, Y., Yoshikawa, T., Oku, S., *et al.* Comparison of effect of mosapride citrate and existing 5-HT<sub>4</sub> receptor agonists on gastrointestinal motility *in vivo* and *in vitro*. *J. Pharmacol. Exp. Ther.* **283(3)**, 1000-1008 (1997).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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