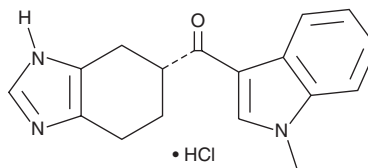


# PRODUCT INFORMATION

## Ramosetron (hydrochloride)

Item No. 15548

**CAS Registry No.:** 132907-72-3  
**Formal Name:** (1-methyl-1H-indol-3-yl)[(6R)-4,5,6,7-tetrahydro-1H-benzimidazol-6-yl]-methanone, monohydrochloride  
**MF:** C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>O • HCl  
**FW:** 315.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 212, 244, 306 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Ramosetron (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ramosetron (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Ramosetron (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ramosetron (hydrochloride) in these solvents is approximately 1, 20, and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ramosetron (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ramosetron (hydrochloride) in PBS (pH 7.2) is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Ramosetron is a potent and selective antagonist of the serotonin (5-HT) receptor subtype 5-HT<sub>3</sub> (K<sub>i</sub> = 0.06 nM).<sup>1,2</sup> It has little or no effect at other 5-HT receptor subtypes or at adrenergic or histamine receptors.<sup>1</sup> Ramosetron competitively blocks serotonin-mediated contraction of the colon.<sup>1</sup> It has applications in ameliorating diarrhea-predominant inflammatory bowel syndrome and postoperative nausea and vomiting.<sup>3,4</sup>

### References

1. Miyata, K., Kamato, T., Nishida, A., *et al.* Pharmacologic profile of (R)-5-[(1-methyl-3-indolyl)carbonyl]-4,5,6,7-tetrahydro-1H-benzimidazolhydrochloride (YM060), a potent and selective 5-hydroxytryptamine<sub>3</sub> receptor antagonist, and its enantiomer in the isolated tissue. *J. Pharmacol. Exp. Ther.* **259**(1), 15-21 (1991).
2. Manning, D.D., Cioffi, C.L., Usyatinsky, A., *et al.* Novel serotonin type 3 receptor partial agonists for the potential treatment of irritable bowel syndrome. *Bioorg. Med. Chem. Lett.* **21**(1), 58-61 (2011).
3. Manabe, N., Rao, A.S., Wong, B.S., *et al.* Emerging pharmacologic therapies for irritable bowel syndrome. *Curr. Gastroenterol. Rep.* **12**(5), 408-416 (2010).
4. Mihara, T., Tojo, K., Uchimoto, K., *et al.* Reevaluation of the effectiveness of ramosetron for preventing postoperative nausea and vomiting: A systematic review and meta-analysis. *Anesth. Analg.* **117**(2), 329-339 (2013).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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