

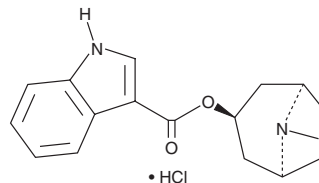
# PRODUCT INFORMATION



## Tropisetron (hydrochloride)

Item No. 21240

**CAS Registry No.:** 105826-92-4  
**Formal Name:** 1H-indole-3-carboxylic acid (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester, monohydrochloride  
**Synonyms:** ICS 205-930, SDZ-ICS 930  
**MF:** C<sub>17</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub> • HCl  
**FW:** 320.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 213, 228, 281 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

Tropisetron (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the tropisetron (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Tropisetron (hydrochloride) is slightly soluble in ethanol.

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 tropisetron (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of tropisetron (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Tropisetron is an antagonist of the serotonin (5-HT) receptor subtype 5-HT<sub>3</sub> (K<sub>i</sub> = 0.8 nM for the mouse receptor).<sup>1</sup> It is selective for 5-HT<sub>3</sub> over the 5-HT<sub>4</sub> receptor subtype (K<sub>i</sub> = 156 nM for the porcine receptor). Tropisetron is also an antagonist of the α<sub>9</sub> nicotinic acetylcholine receptor (nAChR; IC<sub>50</sub> = 166 nM for the rat receptor) and a partial agonist of the α<sub>7</sub> nAChR (K<sub>i</sub> = 6.9 nM for the rat receptor).<sup>2,3</sup> It enhances glycine-induced potentiation of homomeric α<sub>1</sub> but not homomeric α<sub>2</sub> glycine receptors when used at a concentration of 10 μM.<sup>4</sup> Tropisetron (0.1 nM) blocks 5-HT-induced depolarizations in isolated rabbit nodose ganglia.<sup>5</sup> It exhibits anti-emetic effects in a ferret model of emesis induced by cisplatin (Item No. 13119) when administered at a dose of 1 mg/kg.<sup>6</sup> Formulations containing tropisetron have been used in the treatment of nausea and vomiting associated with chemotherapy.

### References

1. Schiavi, G.B., Brunet, S., Rizzi, C.A., *et al. Neuropharmacology* **33(3-4)**, 543-549 (1994).
2. Rothlin, C.V., Katz, E., Verbitsky, M., *et al. Mol. Pharmacol.* **55(2)**, 248-254 (1999).
3. Macor, J.E., Gurley, D., Lanthorn, T., *et al. Bioorg. Med. Chem. Lett.* **11(3)**, 319-321 (2001).
4. Supplisson, S. and Chesnoy-Marchais, D. *Mol. Pharmacol.* **58(4)**, 763-770 (2000).
5. Round, A. and Wallis, D.I. *Br. J. Pharmacol.* **88(2)**, 485-494 (1986).
6. Watson, J.W., Gonsalves, S.F., Fossa, A.A., *et al. Br. J. Pharmacol.* **115(1)**, 84-94 (1995).

#### 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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