PRODUCT INFORMATION



Granisetron (hydrochloride)

Item No. 21239

CAS Registry No.:	107007-99-8	
Formal Name:	1-methyl-N-[(3-endo)-9-methyl-	
	9-azabicyclo[3.3.1]non-3-yl]-	λ.
	1H-indazole-3-carboxamide,	N
	monohydrochloride	И И Н
Synonym:	BRL 43694	
MF:	$C_{18}H_{24}N_4O \bullet HCI$	
FW:	348.9	
Purity:	≥98%	
UV/Vis.:	λ _{max} : 208, 301 nm	• HCI
Supplied as:	A crystalline solid	
Storage:	-20°C	
Stability:	≥4 years	

Laboratory Procedures

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

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 granisetron (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of granisetron (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

Granisetron is an antagonist of the serotonin (5-HT) receptor subtype 5-HT₃ (K_i = 3.9 nM) with antiemetic activity.^{1,2} It is selective for 5-HT₃ over 5-HT₄ receptors (K_i = >1,000 nM).¹ Granisetron (0.3, 1, and 3 mg/kg, p.o.) increases the latency to first vomiting episode and reduces the number of vomiting episodes in a canine model of emesis induced by cisplatin (Item No. 13119).² It also increases the latency to first vomiting episode and reduces the number of vomiting and retching episodes in a ferret model of emesis induced by doxorubicin (Item No. 15007) and cyclophosphamide (Item No. 13849) when administered at doses of 0.1, 0.3, and 1 mg/kg. Formulations containing granisetron have been used in the prevention of nausea and vomiting associated with chemotherapy.

References

- 1. López-Rodriguez, M.L., Benhamś, B., Morcillo, M.J., et al. Benzimidazole derivatives. 2. Synthesis and structure-activity relationships of new azabicyclic benzimidazole-4-carboxylic acid derivatives with affinity for serotoninergic 5-HT₃ receptors. J. Med. Chem. 42(24), 5020-5028 (1999).
- 2. Haga, K., Inaba, K., Shoji, H., et al. The effects of orally administered Y-25130, a selective serotoningreceptor antagonist, on chemotherapeutic agent-induced emesis. Jpn. J. Pharmacol. 63(3), 377-383 (1993).

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

SAFFTY 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

uyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/19/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM