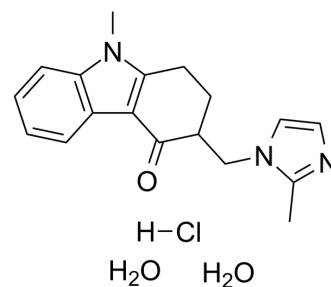


Ondansetron hydrochloride dihydrate

Cat. No.:	HY-B0002A
CAS No.:	103639-04-9
Molecular Formula:	C ₁₈ H ₂₄ ClN ₃ O ₃
Molecular Weight:	365.85
Target:	5-HT Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture and light * The compound is unstable in solutions, freshly prepared is recommended.



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (273.34 mM; Need ultrasonic)						
	H ₂ O : 16.67 mg/mL (45.57 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	2.7334 mL	13.6668 mL	27.3336 mL
				5 mM	0.5467 mL	2.7334 mL	5.4667 mL
10 mM				0.2733 mL	1.3667 mL	2.7334 mL	
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.83 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.83 mM); Clear solution						

BIOLOGICAL ACTIVITY

Description	Ondansetron (GR 38032) hydrochloride dehydrate is an orally active, highly selective and competitive 5-HT ₃ receptor antagonist (crosses the blood-brain barrier). Ondansetron hydrochloride dehydrate can be used in studies of preventing nausea and vomiting associated with cancer chemotherapy, radiation therapy and surgery ^{[1][2]} .
IC ₅₀ & Target	5-HT ₃ Receptor
In Vivo	Ondansetron hydrochloride dehydrate (2 mg/kg; i.p.; single) blocks radiation sickness when combines with Dexamethasone (2 mg/kg) and CP-99,994 (15 mg/kg), in radiation-induced pica model ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male mice of ICR strain (8-week-old; 30-36 g; radiation-induced pica model (kaolin ingestion behavior “pica” may be analogous to nausea and vomiting in mice)) ^[1] .
Dosage:	2 mg/kg
Administration:	Intraperitoneal injection; single.
Result:	Slightly reduced the radiation-induced kaolin consumption by dexamethasone to 48% of the control. Showed good activity of blocking radiation sickness by combining with Dexamethasone (2 mg/kg) and CP-99,994 (15 mg/kg).

CUSTOMER VALIDATION

- Int J Pharm. 2015 Dec 30;496(1):33-41.
- Prog Neuropsychopharmacol Biol Psychiatry. 2022 Nov 30;110689.
- J Ethnopharmacol. 2024 Jan 5:117703.
- Eur J Pharm Sci. 2023 May 22;106475.
- Journal of Radiation Research and Applied Sciences. 2023 Dec, 16(4), 100682.

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REFERENCES

- [1]. Yamamoto K, et al. Ondansetron, dexamethasone and an NK1 antagonist block radiation sickness in mice. Pharmacol Biochem Behav. 2005 Sep;82(1):24-9.
- [2]. Wilde MI, et al. Ondansetron. A review of its pharmacology and preliminary clinical findings in novel applications. Drugs. 1996 Nov;52(5):773-94.

Caution: Product has not been fully validated for medical applications. For research use only.

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