Ondansetron hydrochloride dihydrate

Cat. No.: HY-B0002A

CAS No.: 103639-04-9

Molecular Formula: $C_{18}H_{24}ClN_3O_3$

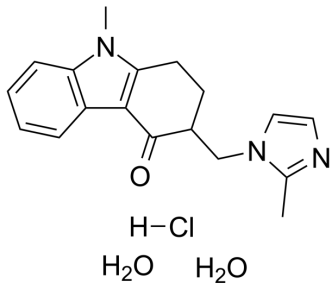
Molecular Weight: 365.85

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_2O : 16.67 mg/mL (45.57 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	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.

See more customer validations on www.MedChemExpress.com

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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA