

Product Data Sheet

Product Name: Ondansetron-13C-d3

Cat. No.: GC47827

Chemical Properties

Cas. No. 2699607-85-5

SMILES O=C1C(CN2C(C)=NC=C2)CCC3=C1C(C=CC=C4)=C4N3[13C]([2H])([2H])([2H])

Formula C17[13C]H16D3N3O

M.Wt 297.4

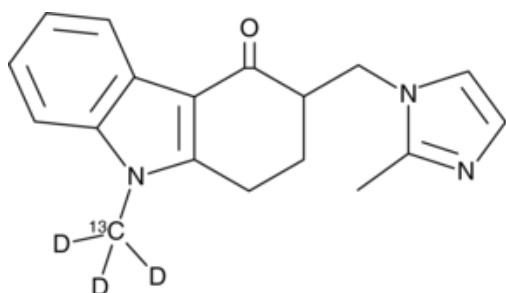
Solubility DMSO: 0.1 mg/ml

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Ondansetron-¹³C-d₃ is intended for use as an internal standard for the quantification of ondansetron by GC- or LC-MS. Ondansetron is an antagonist of the serotonin (5-HT) receptor subtype 5-HT₃ receptor ($K_i = 1.6$ nM).¹ It is selective for the 5-HT₃ receptor over the 5-HT_{1A-D}, 5-HT₂, and 5-HT₄ receptors (K_i s = >1,200 nM). It inhibits 5-HT-induced depolarization of isolated rat vagus nerve and contraction of isolated guinea pig ileum longitudinal muscle-myenteric plexus preparations in a concentration-dependent manner *ex vivo*.² In a ferret model of cisplatin-induced emesis, ondansetron reduces the number of retching and vomiting episodes and increases the latency time to vomit when administered at a dose of 0.01 mg/kg and eliminates retching and vomiting when administered at a dose of 0.1 mg/kg.³ Ondansetron (0.5 and 1 mg/kg) also decreases immobility time in a forced swim test and increases time spent in the light chamber and latency to leave the light

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

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chamber in the light/dark exploration test in a mouse model of diabetes induced by streptozotocin , indicating antidepressant-like and anxiolytic activities.⁴ Formulations containing ondansetron have been used in the treatment of nausea and vomiting associated with chemotherapy, radiotherapy, or following surgery.

1.van Wijngaarden, I., Hamminga, D., van Hes, R., et al.Development of high-affinity 5-HT₃ receptor antagonists. Structure-affinity relationships of novel 1,7-annelated indole derivativesJournal of Medicinal Chemistry36(23)3693-3699(1993) 2.Butler, A., Hill, J.M., Ireland, S.J., et al.Pharmacological properties of GR38032F, a novel antagonist at 5-HT₃ receptorsBr. J. Pharmacol.94(2)397-412(1988) 3.Stables, R., Andrews, P.L.R., Bailey, H.E., et al.Antiemetic properties of the 5HT₃-receptor antagonist, GR38032FCancer Treat. Rev.14(3-4)333-336(1987) 4.Gupta, D., Radhakrishnan, M., and Kurhe, Y.Ondansetron, a 5HT₃ receptor antagonist reverses depression and anxiety-like behavior in streptozotocin-induced diabetic mice: Possible implication of serotonergic systemEur. J. Pharmacol.74459-66(2014)

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