

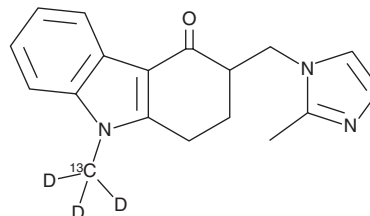
# PRODUCT INFORMATION



## Ondansetron-<sup>13</sup>C-d<sub>3</sub>

Item No. 25754

**CAS Registry No.:** 2699607-85-5  
**Formal Name:** 9-(methyl-<sup>13</sup>C-d<sub>3</sub>)-3-((2-methyl-1H-imidazol-1-yl)methyl)-1,2,3,9-tetrahydro-4H-carbazol-4-one  
**MF:** C<sub>17</sub>[<sup>13</sup>C]H<sub>16</sub>D<sub>3</sub>N<sub>3</sub>O  
**FW:** 297.4  
**Chemical Purity:** ≥98% (Ondansetron)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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

Ondansetron-<sup>13</sup>C-d<sub>3</sub> is intended for use as an internal standard for the quantification of ondansetron by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Ondansetron-<sup>13</sup>C-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the ondansetron-<sup>13</sup>C-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Ondansetron-<sup>13</sup>C-d<sub>3</sub> is soluble in the organic solvent DMSO at a concentration of approximately 0.1 mg/ml.

### Description

Ondansetron is an antagonist of the serotonin (5-HT) receptor subtype 5-HT<sub>3</sub> receptor (K<sub>i</sub> = 1.6 nM).<sup>1</sup> It is selective for the 5-HT<sub>3</sub> receptor over the 5-HT<sub>1A-D</sub>, 5-HT<sub>2</sub>, and 5-HT<sub>4</sub> receptors (K<sub>i</sub>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*.<sup>2</sup> 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.<sup>3</sup> 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 chamber in the light/dark exploration test in a mouse model of diabetes induced by streptozotocin (STZ; Item No. 13104), indicating antidepressant-like and anxiolytic activities.<sup>4</sup> Formulations containing ondansetron have been used in the treatment of nausea and vomiting associated with chemotherapy, radiotherapy, or following surgery.

### References

1. van Wijngaarden, I., Hamminga, D., van Hes, R., *et al.* *J. Med. Chem.* **36**(23), 3693-3699 (1993).
2. Butler, A., Hill, J.M., Ireland, S.J., *et al.* *Br. J. Pharmacol.* **94**(2), 397-412 (1988).
3. Stables, R., Andrews, P.L.R., Bailey, H.E., *et al.* *Cancer Treat. Rev.* **14**(3-4), 333-336 (1987).
4. Gupta, D., Radhakrishnan, M., and Kurhe, Y. *Eur. J. Pharmacol.* **744**, 59-66 (2014).

#### 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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