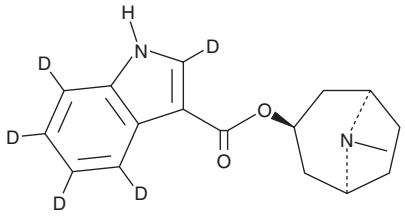
PRODUCT INFORMATION

Tropisetron-d_5

Item No. 30736

CAS Registry No.: 1220284-86-5
Formal Name: 1H-indole-2,4,5,6,7-d5-3-carboxylic acid, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester
MF: $C_{17}H_{15}D_5N_2O_2$
FW: 289.4
Chemical Purity: ≥98% (Tropisetron)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_5); ≤1% d_0
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

Tropisetron-d_5 is intended for use as an internal standard for the quantification of tropisetron (Item No. 21240) 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).

Tropisetron-d_5 is supplied as a solid. A stock solution may be made by dissolving the tropisetron-d_5 in the solvent of choice, which should be purged with an inert gas. Tropisetron-d_5 is slightly soluble in DMSO and methanol.

Description

Tropisetron is an antagonist of the serotonin (5-HT) receptor subtype 5-HT_3 (K_i = 0.8 nM for the mouse receptor).[1] It is selective for 5-HT_3 over the 5-HT_4 receptor subtype (K_i = 156 nM for the porcine receptor). Tropisetron is also an antagonist of the α9 nicotinic acetylcholine receptor (nAChR; IC_{50} = 166 nM for the rat receptor) and a partial agonist of the α7 nAChR (K_i = 6.9 nM for the rat receptor).[2,3] It enhances glycine-induced potentiation of homomeric α1 but not homomeric α2 glycine receptors when used at a concentration of 10 µM.[4] Tropisetron (0.1 nM) blocks 5-HT-induced depolarizations in isolated rabbit nodose ganglia.[5] It exhibits anti-emetic effects in a ferret model of emesis induced by cisplatin (Item No. 13119) when administered at a dose of 1 mg/kg.[6] Formulations containing tropisetron have been used in the treatment of nausea and vomiting associated with chemotherapy.

References

1. Schiavi, G.B., Brunet, S., Rizzi, C.A., *et al. Neuropharmacology* **33(3-4)**, 543-549 (1994).
2. Rothlin, C.V., Katz, E., Verbitsky, M., *et al. Mol. Pharmacol.* **55(2)**, 248-254 (1999).
3. Macor, J.E., Gurley, D., Lanthorn, T., *et al. Bioorg. Med. Chem. Lett.* **11(3)**, 319-321 (2001).
4. Supplisson, S. and Chesnoy-Marchais, D. *Mol. Pharmacol.* **58(4)**, 763-770 (2000).
5. Round, A. and Wallis, D.I. *Br. J. Pharmacol.* **88(2)**, 485-494 (1986).
6. Watson, J.W., Gonsalves, S.F., Fossa, A.A., *et al. Br. J. Pharmacol.* **115(1)**, 84-94 (1995).

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