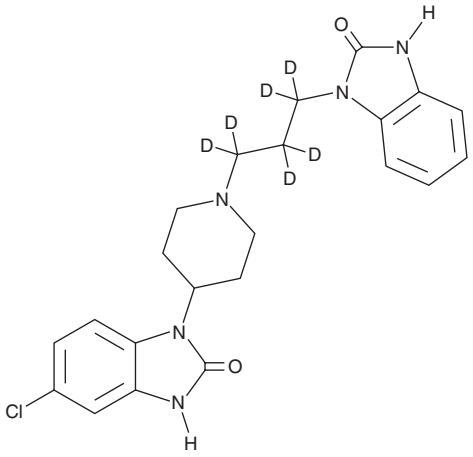
PRODUCT INFORMATION

Domperidone-d_6

Item No. 30152



CAS Registry No.:	1329614-18-7
Formal Name:	5-chloro-1-[1-[3-(2,3-dihydro-2-oxo-1H-benzimidazol-1-yl)propyl-1,1,2,2,3,3-d_6]-4-piperidinyl]-1,3-dihydro-2H-benzimidazol-2-one
MF:	$C_{22}H_{18}ClD_6N_5O_2$
FW:	432.0
Chemical Purity:	≥95% (Domperidone)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_6); ≤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

Domperidone-d_6 is intended for use as an internal standard for the quantification of domperidone (Item No. 18875) 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).

Domperidone-d_6 is supplied as a solid. A stock solution may be made by dissolving the domperidone-d_6 in the solvent of choice, which should be purged with an inert gas. Domperidone-d_6 is slightly soluble in methanol and DMSO.

Description

Domperidone is a dopamine D_2 receptor antagonist (K_i = 0.3 nM in CHO cells expressing the rat receptor).[1,2] It is selective for dopamine D_2 over D_3 receptors (K_i = 9.5 nM).[1] Domperidone (0.5-5 µg/kg) inhibits dipropyl dopamine-induced femoral vasodilation in dogs, indicating dopamine D_2 receptor antagonist activity, and has no effect on dopamine-induced vasodilation in the renal vascular bed in dogs when administered at doses up to 5 mg/kg, indicating a lack of activity at dopamine D_1 receptors.[2] Domperidone (0.5 mg/kg) prevents dopamine-induced decreases in gastric antral motility induced by pentagastrin (Item No. 28546) in dogs.[3] It inhibits apomorphine-induced emesis in dogs (ED_{50} = 0.031 mg/kg, p.o.).[4] Domperidone also increases serum levels of prolactin in male rats.[5]

References

1. Sokoloff, P., Giros, B., Martres, M.P., *et al. Nature* **137(6289)**, 146-151 (1990).
2. Kohli, J.D., Glock, D., and Goldberg, L.I. *Eur. J. Pharmacol.* **89(1-2)**, 137-141 (1983).
3. Bech, K., Hovendal, C.P., and Andersen, D. *Scand. J. Gastroenterol.* **17(1)**, 103-107 (1982).
4. Niemegeers, C.J.E. *Psychopharmacology (Berl).* **78(3)**, 210-213 (1982).
5. Meltzer, H.Y., Simonovic, M., and So, R. *Life Sci.* **32(25)**, 2877-2886 (1983).

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