

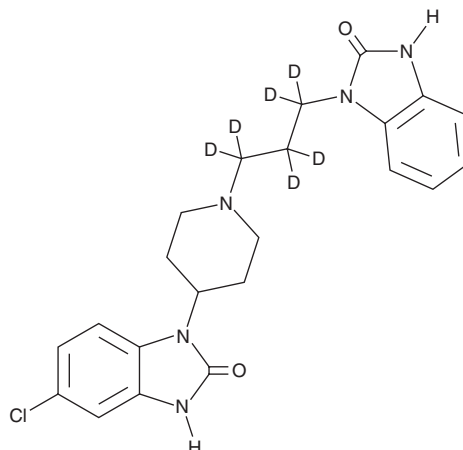
# PRODUCT INFORMATION



## Domperidone-d<sub>6</sub>

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<sub>6</sub>]-4-piperidinyl]-1,3-dihydro-2H-benzimidazol-2-one  
**MF:** C<sub>22</sub>H<sub>18</sub>ClD<sub>6</sub>N<sub>5</sub>O<sub>2</sub>  
**FW:** 432.0  
**Chemical Purity:** ≥95% (Domperidone)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>6</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

Domperidone-d<sub>6</sub> 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<sub>6</sub> is supplied as a solid. A stock solution may be made by dissolving the domperidone-d<sub>6</sub> in the solvent of choice, which should be purged with an inert gas. Domperidone-d<sub>6</sub> is slightly soluble in methanol and DMSO.

### Description

Domperidone is a dopamine D<sub>2</sub> receptor antagonist (K<sub>i</sub> = 0.3 nM in CHO cells expressing the rat receptor).<sup>1,2</sup> It is selective for dopamine D<sub>2</sub> over D<sub>3</sub> receptors (K<sub>i</sub> = 9.5 nM).<sup>1</sup> Domperidone (0.5-5 μg/kg) inhibits dipropyl dopamine-induced femoral vasodilation in dogs, indicating dopamine D<sub>2</sub> 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<sub>1</sub> receptors.<sup>2</sup> Domperidone (0.5 mg/kg) prevents dopamine-induced decreases in gastric antral motility induced by pentagastrin (Item No. 28546) in dogs.<sup>3</sup> It inhibits apomorphine-induced emesis in dogs (ED<sub>50</sub> = 0.031 mg/kg, p.o.).<sup>4</sup> Domperidone also increases serum levels of prolactin in male rats.<sup>5</sup>

### 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).

#### 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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