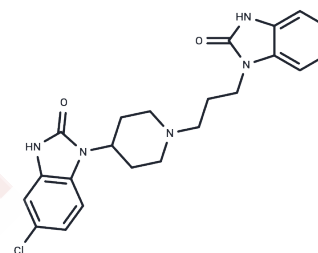


Domperidone

Chemical Properties

CAS No. :	57808-66-9
Formula:	C ₂₂ H ₂₄ ClN ₅ O ₂
Molecular Weight:	425.91
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Domperidone (R33812)(Motilium) is a dopamine blocker and an antidopaminergic reagent. It blocks the action of. It has strong affinities for the D ₂ and D ₃ dopamine receptors, which are found in the chemoreceptor trigger zone, located just outside the blood brain barrier, which - among others - regulates nausea and vomiting (area postrema on the floor of the fourth ventricle and rhomboid fossa).
Targets(IC ₅₀)	Dopamine Receptor
In vitro	Domperidone (a D ₂ R antagonist) inhibits Equilibrative NT1 (ENT1) activity more in the presence than in the absence of Bromocriptine and displays an IC ₅₀ value lower than that of Bromocriptine or Ergovaline in Madin-Darby bovine kidney (MDBK) cells. [1]
In vivo	Domperidone (0.1 mg/kg) results in a significant decrease in feeding behavior and stimulation of basal metabolism, but has no effect on locomotor activity of rats in a Phenomaster system. [2] Domperidone (1.1 mg/kg and 5.5 mg/kg, oral) significantly increases laminar microvascular blood flow (LMBF) in horses, compared with baseline values, beginning 4 hours after administration, and this effect persisted for at least 8 hours. Domperidone (0.2 mg/kg, i.v.) significantly increases laminar microvascular blood flow (LMBF) in horses, compared with baseline values, at 10 and 12 hours after administration. [3] Domperidone can ameliorate deleterious reproductive effects and reduce weight gain associated with fescue toxicosis in heifers. [4] Domperidone-treated mares have shorter gestation duration and foaled closer to their expected parturition date than did control mares. Domperidone-treated mares have higher Mammary gland scores and serum prolactin concentration. [5] Domperidone (5 mg/kg, oral) increases peak plasma acetaminophen concentration and area under the curve in rats, indicating increased gastric emptying. Domperidone decreases the dopamine-induced contractile activity of midjejunal longitudinal muscle strips in rats. [6]

Solubility Information

Solubility	DMSO: 45 mg/mL (105.66 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3479 mL	11.7396 mL	23.4791 mL
5 mM	0.4696 mL	2.3479 mL	4.6958 mL
10 mM	0.2348 mL	1.174 mL	2.3479 mL
50 mM	0.047 mL	0.2348 mL	0.4696 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

- Miles ED, et al. J Agric Food Chem, 2011, 59(17), 9691-9699.
Sudakov SK, et al. Bull Exp Biol Med, 2013, 155(6), 705-707.
Castro JR, et al. Am J Vet Res, 2010, 71(3), 281-287.
Jones KL, et al. J Anim Sci, 2003, 81(10), 2568-2574.
Redmond LM, et al. Am J Vet Res, 1994, 55(5), 722-729.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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