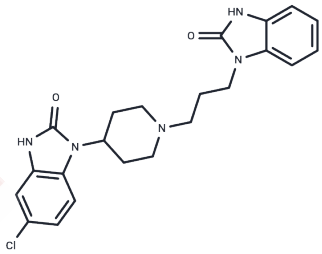
# Data Sheet (Cat.No.T0082)

TargetMol

## Domperidone

### Chemical Properties



CAS No. : 57808-66-9

Formula: C22H24ClN5O2

Molecular Weight: 425.91

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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| Description | Domperidone (R33812)(Motilium) is a dopamine blocker and an antidopaminergic reagent. It blocks the action of. It has strong affinities for the D2 and D3 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(IC50) | Dopamine Receptor |
| In vitro | Domperidone (a D2R antagonist) inhibits Equilibrative NT1 (ENT1) activity more in the presence than in the absence of Bromocriptine and displays an IC50 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

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| Solubility | DMSO: 103 mg/mL (241.84 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (9.39 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.* |

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| In vivo Formulation | *Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

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.