

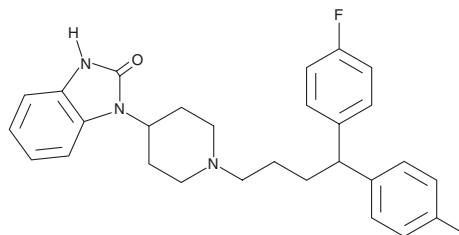
# PRODUCT INFORMATION



## Pimozide

Item No. 16222

**CAS Registry No.:** 2062-78-4  
**Formal Name:** 1-[1-[4,4-bis(4-fluorophenyl)butyl]-4-piperidiny]-1,3-dihydro-2H-benzimidazol-2-one  
**Synonyms:** NSC 170984, R 6238  
**MF:** C<sub>28</sub>H<sub>29</sub>F<sub>2</sub>N<sub>3</sub>O  
**FW:** 461.6  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 283 nm  
**Supplied as:** A crystalline 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

Pimozide is supplied as a crystalline solid. A stock solution may be made by dissolving the pimozide in the solvent of choice, which should be purged with an inert gas. Pimozide is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of pimozide in ethanol is approximately 3 mg/ml and approximately 30 mg/ml in DMSO and DMF.

### Description

Pimozide is a dopamine receptor antagonist ( $K_i$ s = 2.4, 0.3, and 1.8 nM for D<sub>2</sub>, D<sub>3</sub>, and D<sub>4</sub> receptors, respectively).<sup>1</sup> It also binds to eight additional receptors ( $K_d$ s = 25-3,100 nM for the human receptors) and inhibits the voltage-gated sodium channel Na<sub>v</sub>1.2 and the voltage-gated potassium channel K<sub>v</sub>11.1 (IC<sub>50</sub>s = 42 and 340 nM, respectively).<sup>2-4</sup> Pimozide (0.5, 1, and 2 mg/kg) decreases the number of licks and reduces fluid intake of a sweetened solution in rats.<sup>5</sup> It decreases the number of threats and attacks and increases immobility time in the neutral arena aggression test, indicating increased passiveness, in male mice when administered at a dose of 0.75 mg/kg for 10 days.<sup>6</sup> Formulations containing pimozide have been used in the treatment of Tourette syndrome.

### References

1. Burstein, E.S., Ma, J., Wong, S., et al. *J. Pharmacol. Exp. Ther.* **315**(3), 1278-1287 (2005).
2. Richelson, E. and Souder, T. *Life Sci.* **68**(1), 29-39 (2000).
3. Roufos, I., Hay, S., and Schwarz, R.D. *J. Med. Chem.* **39**(7), 1514-1520 (1996).
4. Lau, J.F., Jeppesen, C.B., Rimvall, K., et al. *Bioorg. Med. Chem. Lett.* **16**(20), 5303-5308 (2006).
5. Xenakis, S. and Sclafani, A. *Pharmacol. Biochem. Behav.* **15**(3), 435-442 (1980).
6. Navarro, J.F., Velasco, R., and Manzaneque, J.M. *Prog. Neuropsychopharmacol. Biol. Psychiatry* **24**(1), 131-142 (2000).

#### 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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#### 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