

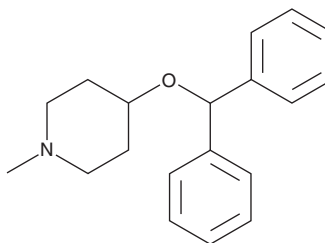
# PRODUCT INFORMATION



## Diphenylpyraline

Item No. 33237

**CAS Registry No.:** 147-20-6  
**Formal Name:** 4-(diphenylmethoxy)-1-methyl-piperidine  
**Synonym:** DPP  
**MF:** C<sub>19</sub>H<sub>23</sub>NO  
**FW:** 281.4  
**Purity:** ≥95%  
**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

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

Diphenylpyraline is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, diphenylpyraline should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Diphenylpyraline has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Diphenylpyraline is a first generation histamine H<sub>1</sub> receptor antagonist (K<sub>i</sub> = 20 nM in a radioligand binding assay using bovine cerebral cortex membranes).<sup>1,2</sup> It also inhibits muscarinic acetylcholine receptors (K<sub>i</sub> = 0.84 nM).<sup>2</sup> Diphenylpyraline (1 and 3 μM) inhibits contractions induced by prostaglandin E<sub>1</sub> (PGE<sub>1</sub>; Item No. 13010) in isolated guinea pig ileum.<sup>3</sup> It inhibits ovalbumin-induced bronchoconstriction in ovalbumin-sensitized guinea pigs when administered intravenously at a dose of 20 μmol/kg.<sup>4</sup> Diphenylpyraline (14 mg/kg) also reduces dopamine uptake in rat nucleus accumbens.<sup>1</sup> Formulations containing diphenylpyraline have been used in the treatment of allergic rhinitis.

### References

1. Oleson, E.B., Ferris, M.J., España, R.A., *et al.* Effects of the histamine H<sub>1</sub> receptor antagonist and bupropion analog diphenylpyraline on dopamine uptake, locomotion and reward. *Eur. J. Pharmacol.* **683(1-3)**, 161-165 (2012).
2. Kubo, N., Shirakawa, S., Kuno, T., *et al.* Antimuscarinic effects of antihistamines: Quantitative evaluation by receptor-binding assay. *Jpn. J. Pharmacol.* **43(3)**, 277-282 (1987).
3. Nakabou, Y., Kubota, M., Takada, K., *et al.* A possible approach to the suppression of side effects induced by PGE<sub>1</sub>. *Prostaglandins Leukot. Essent. Fatty Acids* **52(1)**, 17-20 (1995).
4. Dulabh, R. and Vickers, M.R. The effects of H<sub>2</sub>-receptor antagonists on anaphylaxis in the guinea-pig. *Agents Actions* **8(6)**, 559-565 (1978).

#### 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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