

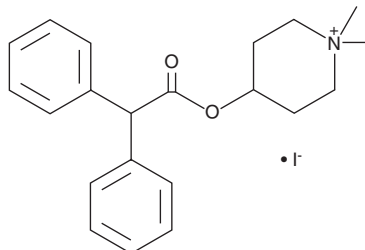
PRODUCT INFORMATION



4-DAMP

Item No. 14574

CAS Registry No.: 1952-15-4
Formal Name: 4-[(2,2-diphenylacetyl)oxy]-1,1-dimethyl-piperidinium, monoiodide
Synonym: 4-Diphenylacetoxy-N-methyl-piperidine methiodide
MF: C₂₁H₂₆NO₂ • I
FW: 451.3
Purity: ≥98%
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

4-DAMP is supplied as a solid. A stock solution may be made by dissolving the 4-DAMP in the solvent of choice, which should be purged with an inert gas. 4-DAMP is soluble in organic solvents such as ethanol and DMSO at a concentration of up to approximately 25 and 100 mM, respectively.

Description

4-DAMP is a potent antagonist of the muscarinic M₃ receptor (pK_i = 9.3).¹⁻³ It is routinely used to study the regulation and functions of the M₃ receptor.^{4,5} 4-DAMP also has a high affinity for the closely-related M₅ receptor (pK_i = 8.9).³

References

1. Barlow, R.B. and Shepherd, M.K. A search for selective antagonists at M₂ muscarinic receptors. *Br. J. Pharmacol.* **85(2)**, 427-435 (1985).
2. Barlow, R.B. and Kitchen, R. The actions of some esters of 4-hydroxyquinuclidine on guinea-pig ileum, artia and rat fundus strip. *Br. J. Pharmacol.* **77(3)**, 549-557 (1982).
3. Watson, N., Daniels, D.V., Ford, A.P.D.W., et al. Comparative pharmacology of recombinant human M₃ and M₅ muscarinic receptors expressed in CHO-K1 cells. *Br. J. Pharmacol.* **127(2)**, 590-596 (1999).
4. Joo, M.C., Kim, Y.S., Choi, E.S., et al. Changes in the muscarinic receptors on the colonic smooth muscles of rats with spinal cord injury. *Ann. Rehabil. Med.* **35(5)**, 589-598 (2011).
5. Lee, B.H., Gauna, A.E., Perez, G., et al. Autoantibodies against muscarinic type 3 receptor in Sjögren's syndrome inhibit aquaporin 5 trafficking. *PLoS One* **8(1)**, (2013).

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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