

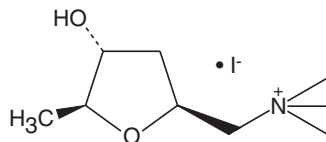
# Product Information



## (+)-Muscarine (iodide salt)

Item No. 10230

**CAS Registry No.:** 24570-49-8  
**Formal Name:** 2,5-anhydro-1,4,6-trideoxy-6-(trimethylammonio)-D-ribo-hexitol, iodide  
**MF:** C<sub>9</sub>H<sub>20</sub>NO<sub>2</sub> • I  
**FW:** 301.2  
**Purity:** ≥95%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that (+)-muscarine (iodide salt) be stored as supplied at -20°C. It should be stable for at least two years.

(+)-Muscarine (iodide salt) is supplied as a crystalline solid. For biological experiments, we suggest that organic solvent-free aqueous solutions of (+)-muscarine (iodide salt) be prepared by directly dissolving the (+)-muscarine (iodide salt) in water. We do not recommend storing the aqueous solution for more than one day.

Muscarine, an alkaloid derived from the poisonous mushroom *A. muscaria*, mimics the action of acetylcholine at muscarinic receptors. It is often used as a biochemical tool for studying signal transduction. Muscarinic receptors transduce their signals by coupling with G proteins.<sup>1</sup> Five muscarinic receptors (M1-M5) have been identified, M1 and M3 are implicated in Alzheimer's disease.<sup>2</sup> (+)-Muscarine is the biologically active stereoisomer of muscarine.<sup>3</sup>

### References

1. Felder, C.C. Muscarinic acetylcholine receptors: Signal transduction through multiple effectors. *FASEB J.* **9**, 619-625 (1995).
2. Sugita, S., Uchimura, N., Jiang, Z.-G., *et al.* Distinct muscarinic receptors inhibit release of  $\gamma$ -aminobutyric acid and excitatory amino acids in mammalian brain. *Proc. Natl. Acad. Sci. USA* **88**, 2608-2611 (1991).
3. Popsavin, V., Beric, O., Popsavin, M., *et al.* A divergent synthesis of (+)-muscarine and (+)-*epi*-muscarine from D-glucose. *Tetrahedron* **56**, 5929-5940 (2000).

### Related Products

Xanomeline oxalate - Item No. 10790 • Arecoline (hydrobromide) - Item No. 13662

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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