

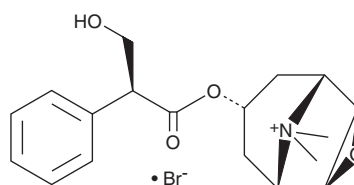
# PRODUCT INFORMATION



## Methylscopolamine (bromide)

Item No. 23862

**CAS Registry No.:** 155-41-9  
**Formal Name:** (1 $\alpha$ ,2 $\beta$ ,4 $\beta$ ,5 $\alpha$ ,7 $\beta$ )-7-[(2S)-3-hydroxy-1-oxo-2-phenylpropoxy]-9,9-dimethyl-3-oxa-9-azoniatricyclo[3.3.1.0<sup>2,4</sup>]nonane, monobromide  
**Synonyms:** NSC 61809, NSC 120606, U-5036  
**MF:** C<sub>18</sub>H<sub>24</sub>NO<sub>4</sub> • Br  
**FW:** 398.3  
**Purity:** ≥98%  
**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

Methylscopolamine (bromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the methylscopolamine (bromide) in the solvent of choice, which should be purged with an inert gas. Methylscopolamine (bromide) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of methylscopolamine (bromide) in these solvents is approximately 5 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of methylscopolamine (bromide) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of methylscopolamine (bromide) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Methylscopolamine is an antagonist of muscarinic acetylcholine receptors ( $K_{d}$ s = 0.25, 0.37, 0.23, 0.22, and 0.3 nM for M<sub>1-5</sub> respectively).<sup>1</sup> It inhibits oxotremorine-induced gastric ulcer formation and pupillary light reflex in rats (ED<sub>50</sub>s = 0.4 and 3.6  $\mu$ g/kg, respectively).<sup>2</sup> It also increases pupil diameter in rats with an ED<sub>200</sub> value of 1.8  $\mu$ g/kg. Formulations containing methylscopolamine have been used for the treatment of peptic ulcers, intestinal spasms, and motion sickness.

### References

1. Jakubík, J., Randáková, A., Zimčík, P., *et al.* Binding of N-methylscopolamine to the extracellular domain of muscarinic acetylcholine receptors. *Sci. Rep.* **7**, 40381 (2017).
2. Daniotti, S. and Del Soldato, P. Comparative studies of the effects of some antimuscarinic agents on gastric damage and pupillary reflex in the rat. *Br. J. Pharmacol.* **82**(2), 305-307 (1984).

#### 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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