Atropine
Item No. 12008

CAS Registry No.: 51-55-8
Formal Name: α-(hydroxymethyl)-(3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester-benzenecacetic acid
Synonyms: DL-Hyoscyamine, Tropine tropate
MF: C_{17}H_{23}NO_3
FW: 289.4
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures
For long term storage, we suggest that atropine be stored as supplied at -20°C. It should be stable for at least two years.

Atropine is supplied as a crystalline solid. A stock solution may be made by dissolving the atropine in the solvent of choice. Atropine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of atropine in these solvents is approximately 16, 10, and 2 mg/ml, respectively.

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 atropine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of atropine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Atropine is a naturally occurring tropane alkaloid extracted from plants of the family Solanaceae including deadly nightshade (A. belladonna). It is a non-selective, competitive antagonist of the muscarinic acetylcholine receptor types M₁, M₂, M₃, M₄, and M₅ (pKᵦ values range from 8.9-9.8).¹ Atropine increases firing of the sinoatrial node and conduction through the atrioventricular node of the heart, opposes the actions of the vagus nerve, blocks acetylcholine receptor sites, and decreases bronchial secretions.² It is classified as an anticholinergic (parasympatholytic) drug and commonly used to dilate the pupils, increase heart rate, reduce salivation and other secretions, and as an antidote against organophosphate poisoning.³

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/12008

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 to you by your institution.

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