

Product Data Sheet

Product Name: Atropine-d5

Cat. No.: GC46894

Chemical Properties

Cas. No. 2124269-77-6

SMILES O=C(C(C1=C([2H])C([2H])=C([2H])C([2H])=C1[2H])CO)O[C@H]2C[C@@H](CC3)N(C)[C@@H]3C2

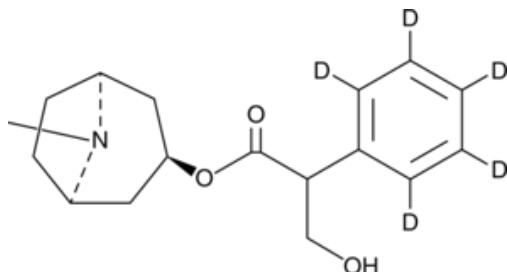
Formula C₁₇H₁₈D₅NO₃ M.Wt 294.4

Solubility Chloroform: slightly soluble, Ethanol: slightly soluble, Methanol: slightly soluble
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Atropine-d₅ is intended for use as an internal standard for the quantification of atropine by GC- or LC-MS. Atropine is a tropane alkaloid that has been found in *A. belladonna* and acts as a non-selective, competitive antagonist of muscarinic acetylcholine receptors (K_{Bs} = 0.16-1.26 nM for the M₁-M₅ receptors).^{1,2} 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.³ Formulations containing atropine have been used to induce mydriasis for ophthalmological exams and in the treatment of cardiac arrest and organophosphate pesticide or muscarinic mushroom poisoning.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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- 1.Sharp, J.M., and Doran, P.M.Characteristics of growth and tropane alkaloid synthesis in Atropa belladonna roots transformed by Agrobacterium rhizogenesJ. Biotechnol.16(3-4)171-185(1990)
- 2.Caulfield, M.P., and Birdsall, N.J.M.International Union of Pharmacology. XVII. Classification of muscarinic acetylcholine receptorsPharmacol. Rev.50(2)279-290(1998)
- 3.Broadley, K.J., and Kelly, D.R.Muscarinic receptor agonists and antagonistsMolecules6(3)142-193(2001)

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