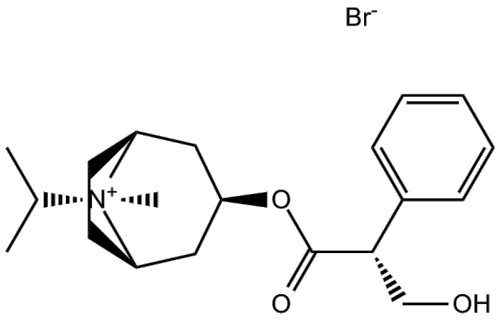
Product Data Sheet

Product Name: Ipratropium Bromide
Cat. No.: GC12717

Chemical Properties

Cas. No.	22254-24-6		
Chemical Name	(8-methyl-8-propan-2-yl-8-azoniabicyclo[3.2.1]octan-3-yl) 3-hydroxy-2-phenylpropanoate;bromide		
SMILES	CC(C)[N+]1(C2CCC1CC(C2)OC(=O)C(CO)C3=CC=CC=C3)C.[Br-]		
Formula	$C_{20}H_{30}BrNO_3$	M.Wt	412.37
Solubility	≥ 20.62mg/mL in DMSO	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

Ipratropium Bromide is a muscarinic antagonist, bronchodilator, N-Isopropyl salt of atropine.Target: mAChRIpratropium bromide, a nonselective muscarinic antagonist, is widely prescribed for the treatment of chronic obstructive pulmonary disease (COPD). In anaesthetised guinea-pigs, bronchoconstriction induced by vagal nerve stimulation was potentiated by low doses of the antimuscarinic bronchodilator drug, ipratropium (0.01-1.0 g/kg); the maximum effect was obtained with 1.0 g/kg which doubled the bronchoconstriction. When the dose was increased above 1.0 g/kg potentiation no longer occurred; instead the vagally induced bronchoconstriction was antagonized [1, 2].

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

[1]. Fryer, A.D. and J. Maclagan, Ipratropium bromide potentiates bronchoconstriction induced by vagal nerve stimulation in the guinea-pig. Eur J Pharmacol, 1987. 139(2): p. 187-91.
[2]. Harvey, K.L., A. Hussain, and H.L. Maddock, Ipratropium Bromide-Mediated Myocardial Injury in In Vitro Models of Myocardial Ischaemia/Reperfusion. Toxicol Sci, 2014.

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