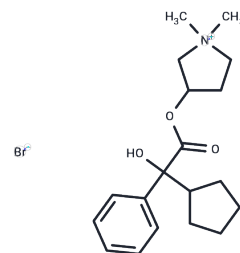


Glycopyrrolate

Chemical Properties

CAS No. :	596-51-0
Formula:	C ₁₉ H ₂₈ BrNO ₃
Molecular Weight:	398.33
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Glycopyrrolate (Glycopyrrolate bromide) is a muscarinic antagonist used as an antispasmodic, in some disorders of the gastrointestinal tract, and to reduce salivation with some anesthetics.
Targets(IC50)	AChR
In vitro	Glycopyrrolate inhibits EFS-induced contraction of guinea-pig trachea and human airways in a concentration-dependent manner. In competition studies, glycopyrrolate binds human peripheral lung and human airway smooth muscle (HASM) muscarinic receptors with affinities in the nanomolar range (K _i values 0.5–3.6 nM). Glycopyrrolate showed no selectivity in its binding to the M ₁ –M ₃ receptors. Kinetics studies show that glycopyrrolate dissociates slowly from HASM muscarinic receptors[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (125.52 mM),Sonication is recommended. H ₂ O: 72 mg/mL (180.75 mM),Sonication is recommended. Ethanol: 55 mg/mL (138.08 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.02 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5105 mL	12.5524 mL	25.1048 mL
5 mM	0.5021 mL	2.5105 mL	5.021 mL
10 mM	0.251 mL	1.2552 mL	2.5105 mL
50 mM	0.0502 mL	0.251 mL	0.5021 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Haddad EB, et al. Br J Pharmacol. 1999, 127(2):413-20.

Schroeder AM, et al. PLoS Curr. 3:RRN1266.

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