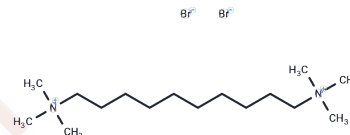


Decamethonium bromide

Chemical Properties

CAS No. : 541-22-0
 Formula: C₁₆H₃₈Br₂N₂
 Molecular Weight: 418.29
 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	Decamethonium bromide (Syncurine) is a neuromuscular blocker and nicotinic AChR partial agonist.
Targets(IC50)	AChR,Cholinesterase (ChE)
In vivo	At the motor neuromuscular endplate, Decamethonium induces a depolarization that prevents the normal release of acetylcholine from presynaptic terminals from acting further, thereby preventing the nerve stimulus from affecting the muscle. During binding, Decamethonium actually activates (depolarizes) the motor endplate, but does not degrade itself, so the cell membrane remains depolarized and unresponsive to normal acetylcholine release. As a depolarizing muscle relaxant or neuromuscular blocker, Decamethonium is used in anesthesia to induce paralysis. It has a short duration of action similar to that of acetylcholine and acts as a partial agonist at nicotinic acetylcholine-like receptors.

Solubility Information

Solubility	H ₂ O: 77 mg/mL (184.08 mM),Sonication is recommended. DMSO: 65 mg/mL (155.39 mM),Sonication is recommended. Ethanol: 24 mg/mL (57.38 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 (4.78 mM),Sonication is recommended. 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.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3907 mL	11.9534 mL	23.9069 mL
5 mM	0.4781 mL	2.3907 mL	4.7814 mL
10 mM	0.2391 mL	1.1953 mL	2.3907 mL
50 mM	0.0478 mL	0.2391 mL	0.4781 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

Lee C, et al. Br J Anaesth, 2002, 88(5), 692-699.

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