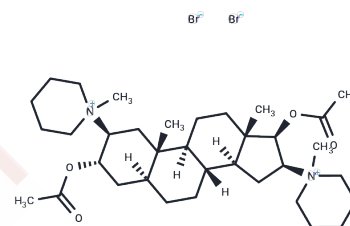


Pancuronium dibromide

Chemical Properties

CAS No. :	15500-66-0
Formula:	C ₃₅ H ₆₀ Br ₂ N ₂ O ₄
Molecular Weight:	732.67
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	Pancuronium dibromide (Pavulon), a competitive AChR antagonist (IC ₅₀ = 5.5 nM), acts as a skeletal muscle relaxant. Pancuronium dibromide (Pancuronium bromide) blocking neuromuscular transmission is achieved by competing with acetylcholine for receptor sites on the motor end-plate.
Targets(IC ₅₀)	AChR
In vitro	Pancuronium results in open channel block of embryonic-type nicotinic acetylcholine receptor channels after coapplication of blocker and acetylcholine, characterized by decrease of the time constant of current decay. Pancuronium also results in competitive block of embryonic-type nicotinic acetylcholine receptor channels. [1] Pancuronium increases heart rate, vecuronium and rocuronium produces positive inotropic effects, and vecuronium shortens refractoriness in isolated rat atria. [2] Pancuronium (0.5 mM) induces a complete fade of the tetanic contraction while leaving the twitch unaffected in the extensor digitorum longus muscle of the rat. Pancuronium decreases the amplitude and increases the tetanic rundown of trains of endplate potentials (e.p.ps) evoked in the frequency of 50 Hz in the extensor digitorum longus muscle of the rat.[3]
In vivo	Pancuronium decreases tidal volume (VT) and minute ventilation (VE) in high dosedogs by 82%. Pancuroniumdecreases tidal volume (VT) and minute ventilation (VE) in low dosedogs by 40% and 55%. [4] Pancuronium limitscerebralhyperemia during prolongedseizuresby attenuating increases inbloodpressure as a result of elimination of skeletal muscle activity in newborn pigs. [5] Pancuroniumresults in a significant difference with control is observed at gallamine concentrations ranging from 0.032-0.32 mM intrachealsmooth musclestrips fromguinea-pigs.[6]

Solubility Information

Solubility	H ₂ O: 250 mg/mL (341.22 mM),Sonication is recommended. DMSO: 60 mg/mL (81.89 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 (2.73 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</i>

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In vivo Formulation	<i>vary and should be modified based on specific experimental conditions.</i>
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3649 mL	6.8244 mL	13.6487 mL
5 mM	0.273 mL	1.3649 mL	2.7297 mL
10 mM	0.1365 mL	0.6824 mL	1.3649 mL
50 mM	0.0273 mL	0.1365 mL	0.273 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

- Löwenick CV, et al. Eur J Pharmacol. 2001 Feb 9;413(1):31-5.
- Liu J, Mo J W, Wang X, et al. Astrocyte dysfunction drives abnormal resting-state functional connectivity in depression. Science Advances. 2022, 8(46): eabo2098
- Li Y, Wu T, Guo C. Inhibition of $\gamma\delta$ T Cells Alleviates Blood-Brain Barrier in Cardiac Arrest and Cardiopulmonary Resuscitation in Mice. Molecular Biotechnology. 2023: 1-10.
- Melnikov AL, et al. Gen Pharmacol, 1999, 33(4), 313-317.
- Gallacci M, et al. Pharmacology, 1994, 49(4), 265-270.
- Boolbol SK, et al. Cancer Res, 1996, 56(11), 2556-2560.
- Pourcyrous M, et al. Pediatr Res, 1992, 31(6), 636-639.

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