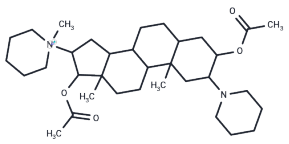
Data Sheet (Cat.No.T1594)

TargetMol

Vecuronium bromide

Chemical Properties



CAS No. : 50700-72-6

Formula: C34H57BrN2O4

Molecular Weight: 637.73

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	Vecuronium bromide (ORG NC 45) is a synthetic, intermediate-acting, mono-quaternary steroid that functions as a non-depolarizing neuromuscular blocking agent with muscle relaxant properties.
Targets(IC50)	AChR
In vitro	Vecuronium inhibits both forms of the muscle-type acetylcholine receptor (IC50: 1-2 nM). Vecuronium combined with methylprednisolone shows additive effects on both receptor forms.[1] Vecuronium interferes with nicotinic processes in the carotid body and inhibits the chemoreceptor neural response to hypoxia. Vecuronium significantly attenuates the increase in CSNA (DeltaCSNA) in response to hypoxia in the carotid body. [2]
In vivo	Vecuronium has a higher biliary clearance than pancuronium in the rats.[3]

Solubility Information

Solubility	H2O: 4 mg/mL (6.27 mM),Sonication is recommended. Ethanol: 93 mg/mL (145.83 mM),Sonication is recommended. DMSO: 100 mg/mL (156.81 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: 3.3 mg/mL (5.17 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	1.5681 mL	7.8403 mL	15.6806 mL
5 mM	0.3136 mL	1.5681 mL	3.1361 mL
10 mM	0.1568 mL	0.784 mL	1.5681 mL
50 mM	0.0314 mL	0.1568 mL	0.3136 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

Kindler CH, et al. Additive inhibition of nicotinic acetylcholine receptors by corticosteroids and the neuromuscular blocking drug vecuronium. Anesthesiology. 2000 Mar;92(3):821-32.
Igarashi A, et al. Vecuronium directly inhibits hypoxic neurotransmission of the rat carotid body. Anesth Analg. 2002 Jan;94(1):117-22, table of contents.
Upton RA, et al. Renal and biliary elimination of vecuronium (ORG NC 45) and pancuronium in rats. Anesth Analg. 1982 Apr;61(4):313-6.

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