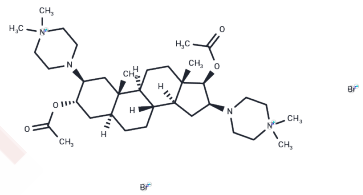
Data Sheet (Cat.No.T12481)

TargetMol

Pipecuronium bromide

Chemical Properties



CAS No. : 52212-02-9

Formula: C35H62Br2N4O4

Molecular Weight: 762.7

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Pipecuronium bromide (RGH-1106) is a selective and potent nAChR antagonist that also acts as a non-depolarising steroidal neuromuscular blocker, causing muscle relaxation, often in conjunction with antibiotics.
Targets(IC50)	AChR
In vitro	Sugammadex exhibits a high affinity for Pipecuronium bromide, which is 6 to 7 times more potent than Rocuronium, thereby enabling a more effective molecular blockade compared to Rocuronium [3].
In vivo	Sugammadex adequately and rapidly reverses pipecuronium bromide induced moderate NMB during sevoflurane anesthesia. Once the train-of-four count has spontaneously returned to 2 responses following pipecuronium bromide administration, a dose of 2.0 mg/kg of sugammadex is sufficient to reverse the NMB[2]. Carboxymethylated γ-cyclodextrin demonstrates efficient and complete reversal of the Pipecuronium bromide-induced neuromuscular block in an ex vivo rat diaphragm experiment [1].

Solubility Information

Solubility	H2O: 80 mg/mL (104.89 mM),Sonication is recommended. DMSO: 120 mg/mL (157.34 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3111 mL	6.5557 mL	13.1113 mL
5 mM	0.2622 mL	1.3111 mL	2.6223 mL
10 mM	0.1311 mL	0.6556 mL	1.3111 mL
50 mM	0.0262 mL	0.1311 mL	0.2622 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.

Reference

Alánt O, et al. First clinical experience with a new neuromuscular blocker pipecurium bromide. Arzneimittelforschung. 1980;30(2a):374-9.

Tassonyi E, et al. Reversal of Deep Pipecuronium-Induced Neuromuscular Block With Moderate Versus Standard Dose of Sugammadex: A Randomized, Double-Blind, Noninferiority Trial. Anesth Analg. 2018 Dec;127(6):1344-1350.

Tassonyi E, et al. Reversal of Pipecuronium-Induced Moderate Neuromuscular Block with Sugammadex in the Presence of a Sevoflurane Anesthetic: A Randomized Trial. Anesth Analg. 2015 Aug;121(2):373-80.

Kárpáti E, et al. Investigation of neuromuscular blocking agents at Richter Ltd. Acta Pharm Hung. 2002;72(1):37-48.