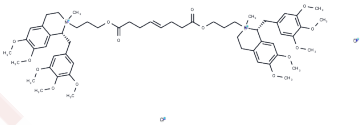
Data Sheet (Cat.No.T22371)

TargetMol

Mivacurium dichloride

Chemical Properties



CAS No. : 106861-44-3

Formula: C58H80Cl2N2O14

Molecular Weight: 1100.17

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Mivacurium dichloride (Mivacurium chloride) is a non-depolarising, rapid neuromuscular blocker of short duration, used therefore as anesthetic, to provide skeletal muscle relaxation in minor surgical operations, in emergency surgical procedures of short to intermediate duration and during intubation of the trachea.
Targets(IC50)	AChR
In vitro	Mivacurium caused pseudo-allergic reactions in wild-type mice by inducing mast cells to release histamine.?However, it did not induce a similar phenomenon in KitW-sh/W-sh mice.?Furthermore, MrgprB2-knockout mice displayed no inflammatory response to mivacurium.?Mivacurium induced LAD2 cell degranulation in a dose-dependent manner.?Mivacurium stimulated intracellular calcium ion (Ca2+) influx in MRGPRX2-HEK293 cells but not in NC-HEK293 cells.?However, mivacurium induced the release of only low levels of mediators in LAD2 cells transfected with MRGPRX2-targeted small interfering (si)RNA.?Notably, cytokine release was not observed in LAD2 cells even when stimulated with high concentrations of mivacurium[1].
In vivo	Mivacurium is rapidly hydrolyzed in the plasma with a short duration of action(< 10 min). Mivacurium has lots of advantages, like a rapid effect, nonneurological toxicity and a lack of heart rate alteration. Mivacurium causes pseudo-allergic reactions in C57 wild-type mice by inducing mast cells to release histamine and a decrease in body temperature[1].

Solubility Information

Solubility	Ethanol: 100 mg/mL (90.9 mM),Sonication is recommended. DMSO: 250 mg/mL (227.24 mM),Sonication is recommended. H2O: 100 mg/mL (90.9 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.909 mL	4.5448 mL	9.0895 mL
5 mM	0.1818 mL	0.909 mL	1.8179 mL
10 mM	0.0909 mL	0.4545 mL	0.909 mL
50 mM	0.0182 mL	0.0909 mL	0.1818 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

Delu Che, et al. Mivacurium Induce Mast Cell Activation and Pseudo-Allergic Reactions via MAS-related G Protein Coupled receptor-X2. Cell Immunol. 2018 Oct;332:121-128.
J E Caldwell. New Skeletal Muscle Relaxants. Int Anesthesiol Clin. Winter 1995;33(1):39-60.

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