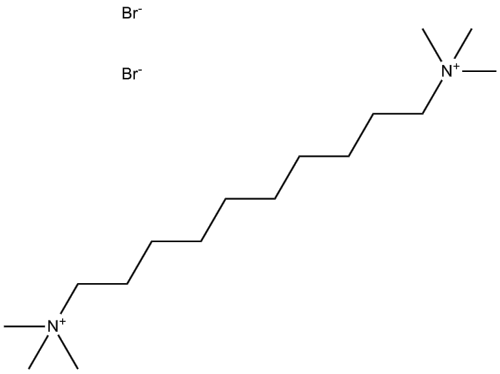
Product Data Sheet

Product Name: Decamethonium Bromide
Cat. No.: GC16255

Chemical Properties

Cas. No.	541-22-0		
Chemical Name	trimethyl-[10-(trimethylazaniumyl)decyl]azanium;dibromide		
SMILES	C[N+](C)(C)CCCCCCCCCC[N+](C)(C)C.[Br-].[Br-]		
Formula	$C_{16}H_{38}N_2.2Br$	M.Wt	418.29
Solubility	≥ 20.9145mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Decamethonium Bromide is a nicotinic AChR partial agonist and neuromuscular blocking agent.Target: nAChRDecamethonium (Syncurine) is a depolarizing muscle relaxant or neuromuscular blocking agent, and is used in anesthesia to induce paralysis. Decamethonium, which has a short action time, is similar to acetylcholine and acts as a partial agonist of the nicotinic acetylcholine receptor. In the motor endplate, it causes depolarization, preventing further effects to the normal release of acetylcholine from the presynaptic terminal, and therefore preventing the neural stimulus from affecting the muscle. In the process of binding, decamethonium actually activates

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(depolarizes) the motor endplate, but since the decamethonium itself is not degraded, the membrane remains depolarized and unresponsive to normal acetylcholine release [1].

References:

[1]. Marcheselli, M., C. Rustichelli, and M. Mauri, Novel antifouling agent zinc pyrithione: determination, acute toxicity, and bioaccumulation in marine mussels (Mytilus galloprovincialis). Environ Toxicol Chem, 2010. 29(11): p. 2583-92.

Caution: Product has not been fully validated for medical applications. For research use only.
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