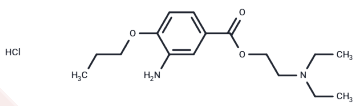
Data Sheet (Cat.No.T0222)

TargetMol

Proparacaine hydrochloride

Chemical Properties



CAS No. : 5875-06-9

Formula: C16H26N2O3·HCl

Molecular Weight: 330.86

Appearance: no data available

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

Biological Description

Description	Proparacaine Hydrochloride is the hydrochloride salt form of proparacaine, a benzoic acid derivative with local anesthetic property. Proparacaine hydrochloride (Proparacaine HCl) stabilizes the neuronal membrane by binding to and inhibiting voltage-gated sodium channels, thereby inhibiting sodium ion influx required for the initiation and conduction of impulses within the neuronal cell, and resulting in a loss of sensation.
Targets(IC50)	Apoptosis,Sodium Channel
In vitro	Proparacaine is more potent and less toxic than cocaine. [1] Proparacaine significantly increases in FHV-1 ($P < 0.01$), C. felis, and 28S rDNA Ct values when fusidic acid is used. [2]
In vivo	Proparacaine inhibits corneal epithelial migration and adhesion through alteration of the actin cytoskeleton. [3] Proparacaine acts like bupivacaine or lidocaine and produces dose-related spinal blockades of motor function, proprioception and nociception. Intrathecal proxymetacaine also produces longer sensory blockade than motor blockade. [4]

Solubility Information

Solubility	DMSO: 55 mg/mL (166.23 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: 61 mg/mL (184.37 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0224 mL	15.1121 mL	30.2243 mL
5 mM	0.6045 mL	3.0224 mL	6.0449 mL
10 mM	0.3022 mL	1.5112 mL	3.0224 mL
50 mM	0.0604 mL	0.3022 mL	0.6045 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

Grant RL, et al. Exp Eye Res, 1994, 58(4), 469-478.
Segarra S, et al. Vet Ophthalmol, 2011, Suppl 1, 5-8.
Dass BA, et al. J Ocul Pharmacol, 1988, 4(3), 187-194.
Hung CH, et al. Neurosci Lett, 2009, 454(3), 249-253.