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Tel: +886-2-2735-9682
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Pilocarpine (Hydrochloride)

Catalog No: tcsc2973

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
54-71-7

Formula:
$C_{11}H_{17}ClN_2O_2$

Pathway:
Neuronal Signaling;GPCR/G Protein

Target:
mAChR;mAChR

Purity / Grade:
>98%

Solubility:
DMSO : 6.8 mg/mL (27.79 mM; Need ultrasonic and warming); H2O : ≥ 37 mg/mL (151.19 mM)

Observed Molecular Weight:
244.72

Product Description

Pilocarpine Hydrochloride is a selective M3-type muscarinic acetylcholine receptor (**M3 muscarinic receptor**) agonist.

IC50 & Target: M3 muscarinic receptor[1]

In Vitro: To evaluate the cytotoxicity of Pilocarpine, the morphology and viability of human corneal stromal (HCS) cells are examined by light microscopy and MTT assay, respectively. Morphological observations show that HCS cells exposed to Pilocarpine

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at a concentration from 0.625 to 20 g/L exhibit dose- and time-dependent proliferation retardation and morphological abnormality such as cellular shrinkage, cytoplasmic vacuolation, detachment from culture matrix, and eventually death, while no obvious difference is observed between those exposed to Pilocarpine below the concentration of 0.625 g/L and controls. Results of MTT assay reveal that the cell viability of HCS cells decrease with time and concentration after exposing to Pilocarpine above the concentration of 0.625 g/L (P[2]. The partial muscarinic agonist, Pilocarpine, evokes concentration-dependent relaxation with an EC_{50} of 2.4 mM in isolated segments of rat tail artery that were constricted with Penylephrine (10 to 200 nM)[3].

In Vivo: The Pilocarpine-induced saliva secretion of the control rats (CN) and exercised (EX) rats is examined. A significantly greater amount of saliva is induced by Pilocarpine in the EX rats than in the CN rats (P+ concentration in the saliva of the EX rats is significantly lower than that of the CN rats (P[1].