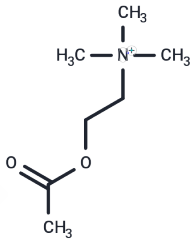
Data Sheet (Cat.No.T6751)

TargetMol

Acetylcholine iodide

Chemical Properties



CAS No. : 2260-50-6

Formula: C7H16NO2·I

Molecular Weight: 273.11

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

Biological Description

Description	Acetylcholine iodide (Acetylcolina) is a neurotransmitter found at neuromuscular junctions, autonomic ganglia, parasympathetic effector junctions, a subset of sympathetic effector junctions, and at many sites in the central nervous system.
Targets(IC50)	Others,Endogenous Metabolite,AChR
In vitro	Acetylcholine iodide (Ach) stimulated SBC3 cell proliferation, adhesion and migration toward fibronectin (Fn) in a dose-dependent manner[1]. ACh ameliorates TNF-α-induced calpain activation by decreasing p38-MAPK phosphorylation and enhancing calpastatin expression. It elicits an anti-apoptotic effect through the activation of the muscarinic ACh receptor (MAChR) and the activation of anti-oxidant systems. ACh increases cell viability and decreases TNF-α-induced apoptosis in H9c2 cells[2].
In vivo	Acetylcholine can inhibit pro-inflammatory cytokine release and protect against cardiomyocyte injury[2].
Cell Research	The SBC3 cells are seeded at 2000 cells/well in treated 96-well plates maintained with RPMI1640 medium containing 10% (v/v) FCS for 24 h. The medium is removed and replaced with 100 µl RPMI1640 containing 1% (v/v) ITS. The cells are incubated in serum free medium for 24 h to synchronize the cell cycle. Then another 100 µl serum-free medium containing the agonist/antagonist under investigation is added. The antagonist is added 30 min before Ach(Acetylcholine iodide). At this time, the cells in a duplicate plate are given 100 µl serum-free medium and a MTT assay is used to determine live cell numbers before treatment with the agonist/antagonist as measured by the absorbance (OD) at 550 nm/650 nm. After 24, 48 or 72 h culture, the remaining cells are assayed to yield post-agonist/antagonist cell numbers using the same method. All the experiments are performed in triplicate.(Only for Reference)

Solubility Information

Solubility	DMSO: 50 mg/mL (183.08 mM),Sonication is recommended. H2O: 250 mg/mL (915.38 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (7.32 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.*

In vivo Formulation	*Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6615 mL	18.3076 mL	36.6153 mL
5 mM	0.7323 mL	3.6615 mL	7.3231 mL
10 mM	0.3662 mL	1.8308 mL	3.6615 mL
50 mM	0.0732 mL	0.3662 mL	0.7323 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

Zhang S, et al. Anticancer Res. 2010, 30(1):97-106.
Zhao M, et al. Cell Physiol Biochem. 2015, 36(5):1877-89.