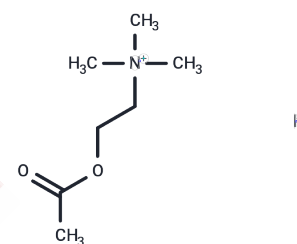


## Acetylcholine iodide

### Chemical Properties

CAS No. :	2260-50-6
Formula:	C <sub>7</sub> H <sub>16</sub> NO <sub>2</sub> ·I
Molecular Weight:	273.11
Appearance:	no data available
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year



### 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
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: 33 mg/mL (120.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## A DRUG SCREENING EXPERT

### 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.

### Reference

Zhang S, et al. Anticancer Res. 2010, 30(1):97-106.

Zhao M, et al. Cell Physiol Biochem. 2015, 36(5):1877-89.

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