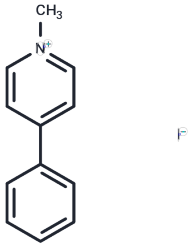
Data Sheet (Cat.No.T9169)

TargetMol
YOUR TARGET MOLECULES

MPP+ iodide

Chemical Properties



CAS No. :	36913-39-0
Formula:	C12H12IN
Molecular Weight:	297.13
Appearance:	no data available
Storage:	store at low temperature,keep away from direct sunlight Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	MPP+ iodide, the metabolite of a neurotoxin MPTP, causes symptom of Parkinson's disease (PD) in animal models by selectively destroying dopaminergic neurons in substantia nigra. MPP+ induces dopamine transporter (DAT) externalization in dopaminergic (DA) neurons, but internalization of serotonin transporter (SERT) in serotonergic (5-HT) neurons. MPP+ induces autophagic cell death in SH-SY5Y cells.
Targets(IC50)	Mitochondrial Metabolism,Autophagy
In vitro	SH-SY5Y cells were treated with MPP+, mimicking the progress of dopaminergic neurons loss in PD. MPP+ (1-3 mM; 24 hours) remarkably decreases the viability of cells in both dose-dependent (1, 2, 3 mM for 24 h) and time dependent (1 mM) manner.[1]. MPP+ also inhibits the activity of nicotinamide adenosine dinucleotide (NADH)-linked respiration in mitochondrial preparations and impairs aerobic glycolysis, leading to the present belief that the inhibition of NADH-linked cell respiration may constitute the final molecular mechanism of MPP+ neurotoxicity[3].

Solubility Information

Solubility	H2O: 100 mg/mL (336.54 mM),Sonication is recommended. DMSO: 50 mg/mL (168.28 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3655 mL	16.8277 mL	33.6553 mL
5 mM	0.6731 mL	3.3655 mL	6.7311 mL
10 mM	0.3366 mL	1.6828 mL	3.3655 mL
50 mM	0.0673 mL	0.3366 mL	0.6731 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

Zhao M, et al. Mitochondrial calcium dysfunction contributes to autophagic cell death induced by MPP+ via AMPK pathway. Biochem Biophys Res Commun. 2019;509(2):390-394.