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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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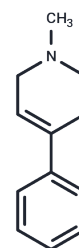
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MPTP hydrochloride

Chemical Properties

CAS No. :	23007-85-4
Formula:	C ₁₂ H ₁₆ ClN
Molecular Weight:	209.72
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year

HCl



Biological Description

Description	MPTP hydrochloride is a precursor of MPP ⁺ , a dopamine neurotoxin with blood-brain barrier permeability. MPTP hydrochloride is toxic to dopaminergic neurons, which can lead to Parkinson's disease, and is widely used in the construction of animal models of Parkinson's disease.
Targets(IC50)	Apoptosis,Dopamine Receptor
In vitro	<p>METHODS: Human neuroblastoma cells M17 were treated with MPTP hydrochloride (1-50 μM) for 48 h. The expression levels of target proteins were detected by Western Blot.</p> <p>RESULTS: MPTP hydrochloride promoted Tau protein phosphorylation in M17 cells. [1]</p> <p>METHODS: Neuroblastoma cell N2AB-1 and glioma cell C6 were treated with MPTP hydrochloride (0.33-33.7 μM) for 24 h, and the growth curves were examined.</p> <p>RESULTS: MPTP hydrochloride did not affect the cell number of actively growing N2AB-1 or C6 cells. [2]</p>
In vivo	<p>METHODS: To construct a subacute Parkinson's model, MPTP hydrochloride (30 mg/kg in 0.9% saline) was administered intraperitoneally to C57BL/6 mice once daily for five days.</p> <p>RESULTS: Subacute MPTP hydrochloride treatment did not cause significant motor deficits, although the dopaminergic system was severely impaired. mPTP hydrochloride significantly increased the level of α-synuclein and the number of astrocytes in the striatum and disrupted the blood-brain barrier in the substantia nigra pars compacta. [3]</p> <p>METHODS: To study the effects of different models on the behavior and pathology of a mouse model of Parkinson's disease, MPTP hydrochloride was used intraperitoneally to construct a subacute model group and a chronic model group. In the subacute model group, MPTP hydrochloride (30 mg/kg) was administered once daily for ten days. In the chronic model group, MPTP hydrochloride (30 mg/kg) was injected once every 3.5 days for five weeks for ten times.</p> <p>RESULTS: In the MPTP hydrochloride-induced subacute Parkinson's disease mouse model, there was a small loss of dopaminergic neurons in the midbrain, but there was no effect on the behavior.The MPTP hydrochloride-induced chronic Parkinson's disease mouse model lost a large number of dopaminergic neurons, which was accompanied by anxiety-like behaviors in addition to motor dysfunction. [4]</p>

Solubility Information

Solubility	H2O: 10 mg/mL DMSO: 5 mg/mL (23.84 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.7683 mL	23.8413 mL	47.6826 mL
5 mM	0.9537 mL	4.7683 mL	9.5365 mL
10 mM	0.4768 mL	2.3841 mL	4.7683 mL
50 mM	0.0954 mL	0.4768 mL	0.9537 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

Qureshi HY, et al. Parkinsonian neurotoxin 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) and alpha-synuclein mutations promote Tau protein phosphorylation at Ser262 and destabilize microtubule cytoskeleton in

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