**Product Name**: MPTP-hydrochloride

**Catalog Number**: T4081

**CAS Number**: 23007-85-4

**Molecular Formula**: C12H16ClN

**Molecular Weight**: 209.72

**Appearance**:

**Melting Point**:

**Description**: MPTP-hydrochloride is a precursor of MPP+ which is toxic to dopaminergic neurons and causes Parkinsonism.

**Storage**: 2 years -80°C in solvent; 3 years -20°C powder;

<table>
<thead>
<tr>
<th>Solubility</th>
<th>DMSO</th>
<th>12 mg/mL</th>
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<td>(&lt; 1 mg/mL refers to the product slightly soluble or insoluble)</td>
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**Receptor (IC50)**

<table>
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<th>Dopamine</th>
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<tr>
<td>Dopamine Receptor</td>
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**In vitro Activity**

Pretreatment with 50 mM 4-phenylpyridine, reduces IC50 (concentration for 50% inhibition of twitch amplitude) values of MPTP from 53 to 18 mM and d-tubocurarine from 0.7 to 0.3 mM, respectively, in mouse phrenic nerve-diaphragm[3].

**In vivo Activity**

The toxic effect of MPTP can be completely abolished in vivo by treatment with a monoamine oxidase inhibitor and potentiated by an inhibitor of catechol-O-methyltransferase[1]. Allopurinol potentiated the MPTP (35 mg/kg)-induced decrease in the DOPAC+HVA/DA ratio and increase in striatal AA oxidation of the rat[2]. Gas1 expressions are significantly elevated in the majority of the reactive astrocytes of the brains with LPS or MPTP insults in animal models[4].

**Reference**


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