SKF 38393 hydrochloride

Cat. No.: HY-12520A
CAS No.: 62717-42-4
Molecular Formula: C₁₆H₁₈ClNO₂
Molecular Weight: 291.77
Target: Dopamine Receptor
Pathway: GPCR/G Protein; Neuronal Signaling
Storage:
- Powder: -20°C 3 years
- 4°C: 2 years
- In solvent: -80°C 6 months
- -20°C: 1 month

SOLVENT & SOLUBILITY

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Concentration</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMSO</td>
<td>≥ 34 mg/mL</td>
<td>3.4274 mL</td>
<td>17.1368 mL</td>
<td>34.2736 mL</td>
</tr>
<tr>
<td></td>
<td>(116.53 mM)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* “≥” means soluble, but saturation unknown.

Preparation of Stock Solutions

<table>
<thead>
<tr>
<th>Solvent</th>
<th>Concentration</th>
<th>Mass</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 mM</td>
<td>3.4274 mL</td>
</tr>
<tr>
<td></td>
<td>5 mM</td>
<td>0.6855 mL</td>
</tr>
<tr>
<td></td>
<td>10 mM</td>
<td>0.3427 mL</td>
</tr>
</tbody>
</table>

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description: SKF 38393 hydrochloride is a selective agonist of the dopamine D₁ receptor (D₁DR) with an IC₅₀ of 110 nM[1].

IC₅₀ & Target: IC₅₀: 110 nM (D₁DR)

In Vitro: The selective D₁-R agonist SKF-38393 (hydrochloride) induces a similar change in cytomorphology and increased the levels of media cAMP[2].
SKF-38393 (hydrochloride) (10 μmol/L; 1 hour) induces increased threonine-phosphorylation of DA- and cAMP-regulated phosphoprotein of Mr 32 kD (DARPP-32) in cultured GC cells[2].
Western Blot Analysis[2].

<table>
<thead>
<tr>
<th>Cell Line</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>GC cells</td>
<td>10 μmol/L</td>
</tr>
</tbody>
</table>
Incubation Time: 1 hour

Result: Induced increased threonine-phosphorylation of DA- and cAMP-regulated phosphoprotein of Mr 32 kD (DARPP-32) in cultured GC cells.

In Vivo

SKF-38393 (hydrochloride) (10 mg/kg; i.p.; every 16 hours) blocks the 1-Methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) -induced depletion of glutathione[3].

SKF-38393 (hydrochloride) attenuates MPTP-induced depletion of dopamine[3].

SKF-38393 (hydrochloride) enhances the activity of superoxide dismutase and hence mimics the action of Selegiline[3].

SKF-38393 (hydrochloride) enhances the frequency but not the amplitude of tetrodotoxin-resistant excitatory postsynaptic currents which argues for a presynaptic locus of D1 action[4].

Animal Model: Balb/c mice (20–25 g)[3]

Dosage: 5 mg/kg, 10 mg/kg

Administration: Intraperitoneal injection; every 16 hours

Result: Blocked the MPTP-induced depletion of glutathione and attenuated MPTP-induced depletion of dopamine.

CUSTOMER VALIDATION


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REFERENCES


Caution: Product has not been fully validated for medical applications. For research use only.
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