Noopept

Cat. No.: HY-17456
CAS No.: 157115-85-0
Molecular Formula: C₁₇H₂₂N₂O₄
Molecular Weight: 318.37
Target: iGluR
Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:
- Powder: -20°C 3 years
- 4°C 2 years
- In solvent: -80°C 6 months
- -20°C 1 month

Solvent & Solubility

10 mM in DMSO

<table>
<thead>
<tr>
<th>Preparing Stock Solutions</th>
<th>Solvent Mass</th>
<th>1 mg</th>
<th>5 mg</th>
<th>10 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 mM</td>
<td>3.1410 mL</td>
<td>15.7050 mL</td>
<td>31.4100 mL</td>
<td></td>
</tr>
<tr>
<td>5 mM</td>
<td>0.6282 mL</td>
<td>3.1410 mL</td>
<td>6.2820 mL</td>
<td></td>
</tr>
<tr>
<td>10 mM</td>
<td>0.3141 mL</td>
<td>1.5705 mL</td>
<td>3.1410 mL</td>
<td></td>
</tr>
</tbody>
</table>

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

BIOLOGICAL ACTIVITY

Noopept (GVS-111) is a medication promoted and prescribed in Russia and neighbouring countries as a nootropic. IC50 Value: Target: in vitro: Nooglutil exhibits pharmacologically significant competition with a selective agonist of AMPA receptors ([G-3H]Ro 48-8587) for the receptor binding sites (with IC50 = 6.4 +/- 0.2 microM), while the competition of noopept for these receptor binding sites was lower by an order of magnitude (IC50 = 80 +/- 5.6 microM) [1]. GVS-111 significantly increased neuronal survival after H(2)O(2)-treatment displaying a dose-dependent neuroprotective activity from 10 nM to 100 microM, and an IC(50) value of 1.21 +/- 0.07 microM. GVS-111 inhibited the accumulation of intracellular free radicals and lipid peroxidation damage in neurons treated with H(2)O(2) or FeSO(4), suggesting an antioxidant mechanism of action [2].

in vivo: N-Phenylacetyl-L-prolylglycine ethyl ester (GVS-111) administered intravenously at a dose of 0.5 mg/kg/day, for the first time 1 h after ischaemic lesion and then for 9 post-operative days, with the last administration 15 min before testing, attenuated the deficit [3]. GVS-111 itself was not found in rat brain 1 h after 5 mg/kg i.p. administration up to limit of detection (LOD) under high performance liquid chromatography (HPLC) conditions [4]. The most pronounced antiinflammatory effect of dipeptide was observed on the model of adjuvant arthritis in rats, where the drug administered over 25 days in a daily dose of 0.5 mg/kg (i.m.) or 5 mg/kg (p.o.) significantly reduced the chronic immune inflammation (on the 12th day, by 94.0 and
74.1%, respectively) [5]. Toxicity: Noopept administered in this dose range induced no irreversible pathologic changes in the organs and systems studied and exhibited no allergenic, immunotoxic, and mutagen activity [6]. Clinical trial: Discontinued

REFERENCES


