

Omberacetam

Catalog No: tcsc1575



Available Sizes

Size: 5mg

Size: 10mg

Size: 25mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

157115-85-0

Formula:

$C_{17}H_{22}N_2O_4$

Pathway:

Membrane Transporter/Ion Channel;Neuronal Signaling

Target:

iGluR;iGluR

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 100 mg/mL (314.10 mM)

Alternative Names:

GVS-111;SGS-111

Observed Molecular Weight:

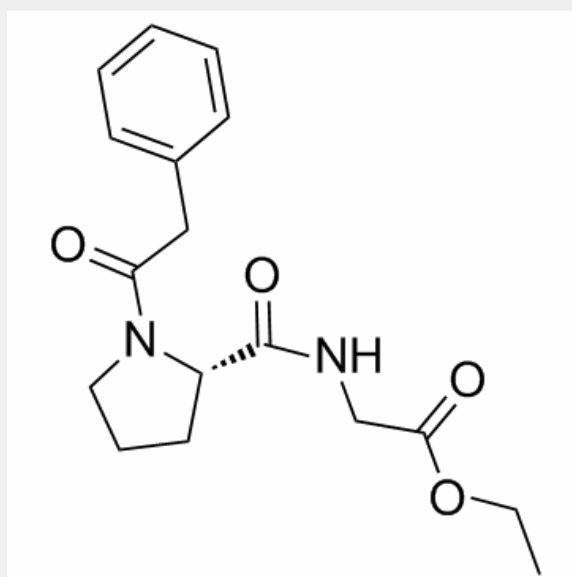
318.37

Product Description

Omberacetam (GVS-111) is a medication promoted and prescribed in Russia and neighbouring countries as a nootropic.

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 $IC_{50} = 6.4 \pm 0.2 \mu M$), while the competition of noopept for these receptor binding sites was lower by an order of magnitude ($IC_{50} = 80 \pm 5.6 \mu M$) [1]. GVS-111 significantly increased neuronal survival after H_2O_2 -treatment displaying a dose-dependent neuroprotective activity from 10 nM to 100 μM , and an IC_{50} value of $1.21 \pm 0.07 \mu M$. GVS-111 inhibited the accumulation of intracellular free radicals and lipid peroxidation damage in neurons treated with H_2O_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].



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