Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Citicoline

Catalog No: tcsc0009633

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
987-78-0

Formula:
$C_{14}H_{26}N_4O_{11}P_2$

Pathway:
Others

Target:
Others

Purity / Grade:
>98%

Solubility:
H2O : ≥ 103.33 mg/mL (211.60 mM)

Alternative Names:
cytidine diphosphate-choline;CDP-Choline;cytidine 5'-diphosphocholine

Observed Molecular Weight:
488.32

Product Description

Citicoline is an intermediate in the synthesis of phosphatidylcholine, a component of cell membranes. Citicoline exerts neuroprotective effects.

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In Vitro: To determine the potential neuroprotective activity of Citicoline and Homotaurine, treated retinal cells are treated with increasing concentrations of Citicoline or Homotaurine for 24 hours. 1 µM, 10 µM and 100 µM of Citicoline or Homotaurine are used to investigate whether may contribute to a reduced cell viability in retinal cells. Retinal cells are well preserved in Citicoline- or Homotaurine-treated cultures, with no evidence of toxicity or significant loss of viability after treatments. 100 µM of Citicoline is not harmful to retinal neuroglial cells in vitro and 100 µM of Homotaurine is an effective concentration to enhance neuroprotection in a model of experimental glaucoma. Therefore, this concentration of Citicoline and Homotaurine is used for all subsequent experiments. To evaluate whether cotreatment with Citicoline and Homotaurine is able to induce a synergistic neuroprotective effect against glutamate excitotoxicity, retinal cell cultures are exposed to Citicoline 100 µM, Homotaurine 100 µM, and Citicoline+Homotaurine 100 µM, 24 hours before glutamate treatment. In the presence of 100 µM Citicoline, a significant increase in cell viability is observed[1].

In Vivo: Administration of Citicoline in a dose of 1000 mg/kg produces more pronounced increase in the threshold of clonic seizures and tonic phase of seizures with lethal outcome (by 18.54 and 50.08% respectively, in comparison with the control). The anticonvulsant effect is most pronounced after injection of Citicoline in a dose of 1000 mg/kg[2].