

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:

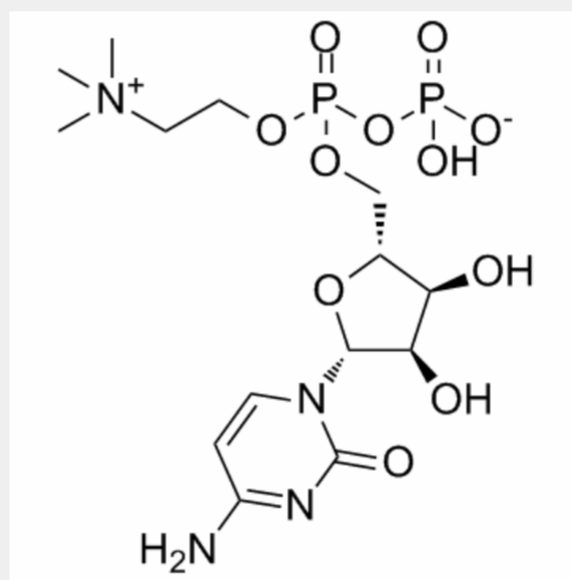
488.32

Product Description

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

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 μ M, 10 μ M and 100 μ M 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 μ M of Citicoline is not harmful to retinal neuroglial cells in vitro and 100 μ M 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 μ M, Homotaurine 100 μ M, and Citicoline+Homotaurine 100 μ M, 24 hours before glutamate treatment. In the presence of 100 μ M 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].



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