



Citicoline

Catalog No: tcsc0009633



Available Sizes

Size: 100mg

Size: 500mg



Specifications

CAS No:

987-78-0

Formula:

 $\mathsf{C}_{14}\mathsf{H}_{26}\mathsf{N}_4\mathsf{O}_{11}\mathsf{P}_2$

Pathway:

Others

Target:

Others

Purity / Grade:

>98%

Solubility:

 $H2O : \ge 103.33 \text{ mg/mL} (211.60 \text{ mM})$

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. $1\,\mu\text{M}$, $10\,\mu\text{M}$ and $100\,\mu\text{M}$ 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. $100\,\mu\text{M}$ of Citicoline is not harmful to retinal neuroglial cells in vitro and $100\,\mu\text{M}$ 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 $100\,\mu\text{M}$, Homotaurine $100\,\mu\text{M}$, and Citicoline+Homotaurine $100\,\mu\text{M}$, 24 hours before glutamate treatment. In the presence of $100\,\mu\text{M}$ 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].

All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!