

# 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**

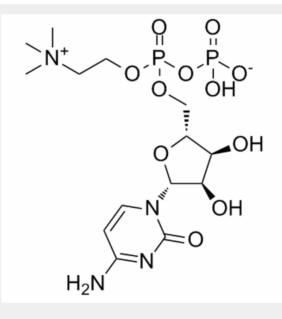
Citicoline is an intermediate in the synthesis of phosphatidylcholine, a component of cell membranes. Citicoline exerts neuroprotective effects.

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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.  $1 \mu$ M,  $10 \mu$ M and  $100 \mu$ 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.  $100 \mu$ M of Citicoline is not harmful to retinal neuroglial cells in vitro and  $100 \mu$ 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  $100 \mu$ M, Homotaurine  $100 \mu$ M, and Citicoline  $100 \mu$ M, 24 hours before glutamate treatment. In the presence of  $100 \mu$ M Citicoline, a significant increase in cell viability is observed<sup>[1]</sup>.

*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<sup>[2]</sup>.



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