# Tramiprosate

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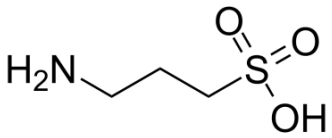
| **Cat. No.:** | HY-14602 |
| **CAS No.:** | 3687-18-1 |
| **Molecular Formula:** | $C_3H_9NO_3S$ |
| **Molecular Weight:** | 139.17 |
| **Target:** | Amyloid-β |
| **Pathway:** | Neuronal Signaling |
| **Storage:** | Powder -20°C 3 years<br>4°C 2 years<br>In solvent -80°C 6 months<br>-20°C 1 month |



## SOLVENT & SOLUBILITY

**In Vitro**

$H_2O$ : 20 mg/mL (143.71 mM; Need ultrasonic)
DMSO : 1 mg/mL (7.19 mM; Need ultrasonic)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 7.1855 mL | 35.9273 mL | 71.8546 mL |
| 5 mM | 1.4371 mL | 7.1855 mL | 14.3709 mL |
| 10 mM | 0.7185 mL | 3.5927 mL | 7.1855 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: PBS
Solubility: 140 mg/mL (1005.96 mM); Clear solution; Need ultrasonic

## BIOLOGICAL ACTIVITY

**Description**

Tramiprosate (Homotaurine), an orally active and brain-penetrant natural amino acid found in various species of red marine algae. Tramiprosate binds to soluble Aβ and maintains Aβ in a non-fibrillar form. Tramiprosate is also a GABA analog and possess neuroprotection, anticonvulsion and antihypertension effects[1][2][3].

**In Vitro**

Tramiprosate (200 μg/mL, 40 μg/mL, 8 μg/mL and 1.6 μg/mL; 1 hours) significantly attenuates oxygen/glucose deprivation (OGD)- or NMDA-induced injury in NGF-differentiated PC12 cells and primary cortical neurons. Tramiprosate decreases the intensity of the association between nNOS and PSD95, and Tramiprosate also inhibits the translocation of nNOS from the cytosol to the membrane[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

Tramiprosate (6.25-50 mg/kg; intraperitoneal injection; once) treatment dose-dependently reduces the infarct volume after

MCAO. Tramiprosate (50 mg/kg) treatment shows a significant neurological functional recovery[1].

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| Animal Model: | Adult male Sprague-Dawley rats (200-250 g) subjected to middle cerebral artery occlusion (MCAO)[1] |
| Dosage: | 50 mg/kg, 25 mg/kg, 12.5 mg/kg or 6.25 mg/kg |
| Administration: | Intraperitoneal injection; once |
| Result: | Dose-dependently reduced the infarct volume after MCAO. |

## REFERENCES


[1]. Wu S et al. Tramiprosate protects neurons against ischemic stroke by disrupting the interaction between PSD95 and nNOS. Neuropharmacology. 2014 Aug;83:107-17.

[2]. Francine Gervais, et al. Targeting soluble Abeta peptide with Tramiprosate for the treatment of brain amyloidosis. Neurobiol Aging. 2007 Apr;28(4):537-47.

[3]. R G Fariello, et al. Homotaurine (3 aminopropanesulfonic acid; 3APS) protects from the convulsant and cytotoxic effect of systemically administered kainic acid. Neurology. 1982 Mar;32(3):241-5.





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