

Product Data Sheet

Product Name: DL-threo-β-Hydroxyaspartic Acid

Cat. No.: GC49829

Chemical Properties

Cas. No. 4294-45-5

SMILES OC([C@@H](O)[C@H](N)C(O)=O)=O

Formula C₄H₇NO₅ M.Wt 149.1

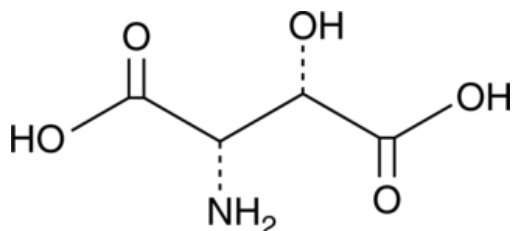
Solubility Acetonitrile: Slightly soluble, Chloroform: Slightly soluble, DMF: Slightly soluble, DMSO: Slightly soluble, Ethanol: Slightly soluble, PBS (pH 7.2): Slightly soluble, Water: Slightly soluble

Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

DL-threo-β-Hydroxyaspartic acid is an inhibitor of excitatory amino acid transporters (EAATs).^{1,2} It inhibits glutamate uptake in COS-1 cells expressing human EAAT1 or EAAT2 (IC₅₀s = 96 and 31 μM, respectively) as well as inward currents induced by L-aspartate in EAAT4-expressing *Xenopus* oocytes (K_i = 0.6 μM) and by L-glutamate in EAAT5-expressing oocytes (K_i = 2.5 μM) voltage-clamped at -60 mV. Intrathecal administration of DL-threo-β-hydroxyaspartic acid (7.5 and 15 μg/animal) reduces the number of flinches and shakes in the second phase of the formalin test in

Caution: Product has not been fully validated for medical applications. For research use only.

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rats.³

1. Shimamoto, K., Lebrun, B., Yasuda-Kamatani, Y., et al. α -threo- β -benzyloxyaspartate, a potent blocker of excitatory amino acid transporters. *Mol. Pharmacol.* 53(2)195-201(1998) 2. Shigeri, Y., Shimamoto, K., Yasuda-Kamatani, Y., et al. Effects of threo- β -hydroxyaspartate derivatives on excitatory amino acid transporters (EAAT4 and EAAT5). *J. Neurochem.* 79(2)297-302(2001) 3. Yaster, M., Guan, X., Petralia, R.S., et al. Effect of inhibition of spinal cord glutamate transporters on inflammatory pain induced by formalin and complete Freund's adjuvant. *Anesthesiology* 114(2)412-423(2011)

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