

Product Data Sheet

Product Name: H-Tyr-OH

Cat. No.: GA10828

Chemical Properties

Cas. No. 60-18-4

Chemical Name (2S)-2-amino-3-(4-hydroxyphenyl)propanoic acid

SMILES C1=CC(=CC=C1CC(C(=O)O)N)O

Formula $C_9H_{11}NO_3$

M.Wt 181.2

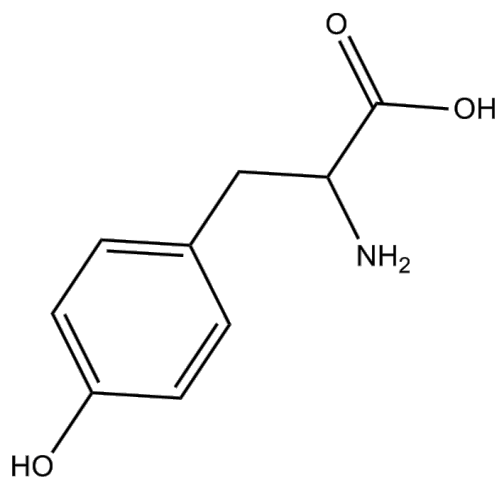
Solubility 1M HCl : 50 mg/mL (275.95 mM; Need ultrasonic); 0.1 M HCL : 25 mg/mL (137.98 mM; Need ultrasonic); DMSO : < 1 mg/mL (insoluble or slightly soluble)

Storage Store at -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



Protocol

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Kinase experiment: Posterior cortex, hippocampus, striatum and liver supernatants of 30-day-old rats are pre-incubated for 30 min at 30°C in the presence of L-Tyrosine (Tyr) at final concentrations ranging from 0.1, 1.0, 2.0 or 4.0 mM, and the activities of citrate synthase, malate dehydrogenase and respiratory chain complexes I, II, II–III and IV are evaluated[1].

Animal experiment: The equivalent of 500 mg/kg body weight of free L-Tyrosine is intraperitoneally administered in 30-day-old rats. Controls receive in saline solution. About 1 h after injections, rats are killed by decapitation without anesthesia[1].

References:

[1]. Ferreira GK, et al. Effect of L-tyrosine in vitro and in vivo on energy metabolism parameters in brain and liver of young rats. *Neurotox Res.* 2013 May;23(4):327-35.

Background

L-Tyrosine is a non-essential amino acid which can inhibit citrate synthase activity in the posterior cortex.

Results show that L-Tyrosine in vitro inhibits citrate synthase activity in the posterior cortex (2.0 and 4.0 mM), malate dehydrogenase is not altered by L-Tyrosine and succinate dehydrogenase is increased in the posterior cortex (0.1, 1.0, 2.0 and 4.0 mM), hippocampus (1.0, 2.0 and 4.0 mM), striatum (4.0 mM) and liver (0.1, 1.0, 2.0 and 4.0 mM). When complex I activity is analyzed, inhibition is observed in hippocampus (4.0 mM). In addition to inhibition in the hippocampus, complex II also is inhibited in the posterior cortex (0.1, 1.0, 2.0 and 4.0 mM) and liver (1.0, 2.0 and 4.0 mM). For complex II–III, activity is not altered by L-Tyrosine, and complex IV activity has decreased in the posterior cortex (1.0, 2.0 and 4.0 mM) following treatment with L-Tyrosine[1].

The acute administration of L-Tyrosine inhibits the activity of citrate synthase in the posterior cortex and liver; however, in the striatum, the activity is increased. The results also demonstrate that acute administration of L-Tyrosine inhibits malate dehydrogenase and complex II, II–III and IV of the mitochondrial respiratory chain activity in the posterior cortex and liver of rats. The succinate

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

dehydrogenase enzyme and complex I activity are inhibited in the posterior cortex and increased in the striatum. Furthermore, energy metabolism in the hippocampus is not amended by an acute administration of L-Tyrosine[1].

References:

[1]. Ferreira GK, et al. Effect of L-tyrosine in vitro and in vivo on energy metabolism parameters in brain and liver of young rats. Neurotox Res. 2013 May;23(4):327-35.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA