

Homocarnosine acetate

Chemical Properties

CAS No. :

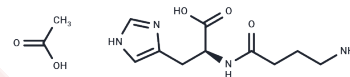
Formula: C₁₂H₂₀N₄O₅

Molecular Weight: 300.31

Keep away from moisture

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Homocarnosine acetate is a dipeptide unique to brain consisting of γ -aminobutyric acid (GABA) and histidine. Homocarnosine acetate has antioxidant and anti-inflammatory actions, prevention of DNA damage, and inhibition of advanced glycation end-product formation
Targets(IC50)	GABA Receptor,Endogenous Metabolite
In vitro	Homocarnosine acetate possesses greater tolerance to degradation by serum carnosinase relative to Carnosine. Homocarnosine acetate is known to be exclusively present in brain and cerebrospinal fluid and acts as a neuroprotective agent in a broad range of disease conditions. Homocarnosine acetate exerts antioxidant activity and prevent DNA oxidative damage to a similar extent as Carnosine[1]. Homocarnosine acetate is composed of γ -aminobutyric acid (GABA) and histidine and has a similar structure to Carnosine, with the only difference being an extra carbon atom in GABA compared to that in β -alanine of carnosine[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (166.49 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3299 mL	16.6495 mL	33.2989 mL
5 mM	0.666 mL	3.3299 mL	6.6598 mL
10 mM	0.333 mL	1.6649 mL	3.3299 mL
50 mM	0.0666 mL	0.333 mL	0.666 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Thanutchaporn Kumrungsee, et al. Dietary GABA induces endogenous synthesis of a novel imidazole peptide homocarnosine in mouse skeletal muscles. *Amino Acids*. 2020 May;52(5):743-753.

O A Petroff, et al. Vigabatrin increases human brain homocarnosine and improves seizure control. *Ann Neurol*. 1998 Dec;44(6):948-52.

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