

Product Data Sheet

Product Name: Homocarnosine

Cat. No.: GC48897

Chemical Properties

Cas. No. 3650-73-5

SMILES OC([C@H](CC1=CN=CN1)NC(CCCN)=O)=O

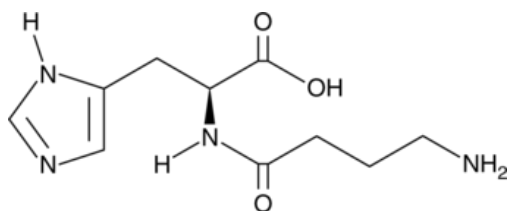
Formula C₁₀H₁₆N₄O₃ M.Wt 240.3

Solubility DMF: 30 mg/ml, DMSO: 10 mg/ml, Ethanol: 1 mg/ml, PBS (pH 7.2): 10 mg/ml
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



Background

Homocarnosine is a dipeptide composed of GABA and L-histidine that has been found in cerebrospinal fluid and the brain.¹ It inhibits lipid peroxidation induced by AAPH when used at a concentration of 10 mM.² Homocarnosine (1 mM) decreases lactate dehydrogenase (LDH) and prostaglandin E₂ release from PC12 cells in an *in vitro* model of ischemia induced by oxygen-glucose deprivation.³ It reduces infarct area and neurological deficit scores in a rat model of cerebral ischemia-reperfusion injury induced by middle cerebral artery occlusion (MCAO).⁴ Homocarnosine (5 mg/animal) reduces mortality in a mouse model of subcutaneous *S. aureus* infection.⁵

1. Crush, K.G. Carnosine and related substances in animal tissues Comp. Biochem. Physiol. 34(1)3-30 (1970) 2. Kohen, R., Yamamoto, Y., Cundy, K.C., et al. Antioxidant activity of carnosine,

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

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homocarnosine, and anserine present in muscle and brain Proc. Natl. Acad. Sci. USA 85(9)3175-3179(1988) 3. Tabakman, R., Lazarovici, P., and Kohen, R. Neuroprotective effects of carnosine and homocarnosine on pheochromocytoma PC12 cells exposed to ischemia J. Neurosci. Res. 68(4)463-469(2002) 4. Huang, J., Wang, T., Yu, D., et al. L-Homocarnosine attenuates inflammation in cerebral ischemia-reperfusion injury through inhibition of nod-like receptor protein 3 inflammasome Int. J. Biol. Macromol. 118(Pt A)357-364(2018) 5. Mukkada, A.J., Nutini, L.G., and Cook, E.S. Prophylactic effects of γ -aminobutyrylhistidine (homocarnosine) on experimental staphylococcal infections in mice Appl. Microbiol. 18(4)641-645(1969)

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