

Product Data Sheet

Product Name: Hydroxyproline

Cat. No.: GC81574

Chemical Properties

Cas. No. 6912-67-0

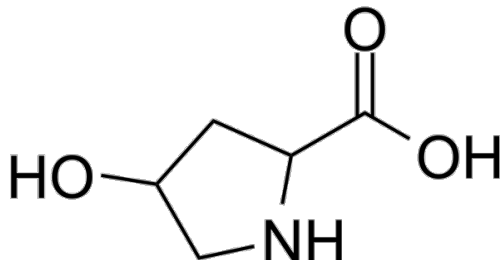
Formula $C_5H_9NO_3$ M.Wt 131.13

Solubility H_2O : 200 mg/mL (1525.20 mM; Need ultrasonic) Storage Store at 4°C, protect from light

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

Hydroxyproline (DL-Hydroxyproline) is a non-essential amino acid and one of the main components of collagenous tissues. Hydroxyproline acts as a substrate for mitochondrial hydroxyproline oxidase to generate ROS. Hydroxyproline promotes the synthesis of glutathione, DNA, heme and proteins via conversion to Glycine. Hydroxyproline promotes the activation of caspase-9 and apoptosis in cancer cells treated with Doxorubicin. Hydroxyproline serves as a biochemical marker. Hydroxyproline is used in research related to various diseases including colon cancer, diabetes and arthritis [1] [2].

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

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In Vivo, Hydroxyproline (oral; dietary supplementation) enhances the growth of young salmon fed plant protein-based diets^[1]. Hydroxyproline (oral; dietary supplementation) enhances the growth performance of turbot fed high plant protein source-based diets^[1].

In Vitro, Hydroxyproline (0.5 mM) inhibits hydroxyl radical generation via the Fenton reaction ^[1]. Hydroxyproline (0.1-10 mM) promotes caspase-9 activation and apoptosis in adriamycin-treated human colon carcinoma RKO cells via ROS generation^[1].

References:

- [1]. Wu Z, et al. Metabolism, Nutrition, and Redox Signaling of Hydroxyproline. Antioxidants & redox signaling. 2019 Feb 01;30(4):674-682.
- [2]. Srivastava AK, et al. Hydroxyproline: A Potential Biochemical Marker and Its Role in the Pathogenesis of Different Diseases. Current protein & peptide science. 2016;17(6):596-602.

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