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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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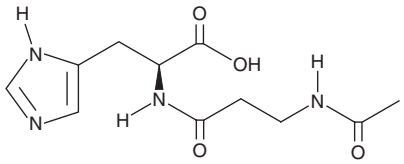
PRODUCT INFORMATION

N-acetyl-L-Carnosine

Item No. 18817

CAS Registry No.: 56353-15-2
Formal Name: N-acetyl-β-alanyl-L-histidine
Synonym: NAC
MF: $C_{11}H_{16}N_4O_4$
FW: 268.3
Purity: ≥95%
Supplied as: A crystalline solid
Storage: 20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

N-acetyl-L-carnosine (NAC) is supplied as a crystalline solid. A stock solution may be made by dissolving the NAC in the solvent of choice. NAC is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 0.5 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of NAC can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of NAC in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

NAC is a dipeptide and acetylated form of L-carnosine (Item No. 29825) that has been found in heart and skeletal muscle and has antioxidant and anticataract activities.[1,2] It reduces iron- and ascorbate-induced malondialdehyde (MDA) accumulation in liposomes when used at concentrations of 10 and 20 mM.[1] Topical administration of N-acetyl-L-carnosine (1% v/v) reduces cortical opacities in a canine model of age-related cataracts.[2]

References

1. Babizhayev, M.A., Yermakova, V.N., Sakina, N.L., *et al.* N alpha-acetylcarnosine is a prodrug of L-carnosine in ophthalmic application as antioxidant. *Clin. Chim. Acta* **254(1)**, 1-21 (1996).
2. Babizhayev, M.A., Deyev, A.I., Yermakova, V.N., *et al.* Lipid peroxidation and cataracts: N-acetylcarnosine as a therapeutic tool to manage age-related cataracts in human and in canine eyes. *Drugs R.D.* **5(3)**, 125-139 (2004).

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