



Desert Hedgehog (C23II), human recombinant (rHuDHH)

Catalog No: 97664
Lot No: XXXXX
Source: *E. coli*
Synonyms: HHG-3, Desert Hedgehog homolog, MGC35145, Desert hedgehog protein, DHH

Background

DHH is part of the Hedgehog family which encodes signaling molecules that are involved in regulating morphogenesis. DHH protein is a precursor that is autocatalytically cleaved, the N-terminal portion is soluble and contains the signalling activity while the C-terminal portion is involved in precursor processing. Additionally, the C-terminal product covalently attaches a cholesterol moiety to the N-terminal product, restricting the N-terminal product to the cell surface and preventing it from freely diffusing throughout the organism. Defects in DHH protein have been associated with partial gonadal dysgenesis (PGD) accompanied by minifascicular polyneuropathy. DHH plays a role both male gonadal differentiation and perineurial development. DHH plays a role in intercellular signaling which is essential for a variety of patterning events during development. DHH functions as a spermatocyte survival factor in the testes & is essential for testes development.

Description

DHH (C23II) Human Recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 177 amino acids and having a molecular mass of 19.9 kDa. DHH (C23II) is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in 1 x PBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized DHH (C23II) in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized DHH (C23II) although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution DHH (C23II) should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

IIGPGRGPVG RRRYARKQLV PLYKQFVPG VPERTLGASG PAEGRVARGS ERFRLDLPNY NPDIIFKDEE NSGADRLMTE
RCKERVNALA IAVMMNMPGV RLRVTEGWDE DGHHAQDSLH YEGRALDITT SDRDRNKYGL LARLAVEAGF DWVYYESRNH
VHVSVKADNS LAVRAGG

Activity

The biological activity was determined by its ability to induce alkaline phosphatase production by C3H/10T1/2 (CCL-226) cells. The expected ED50 for this effect is 15-45 µg/ml.

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Usage

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CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51