DATASHEET
Version 20181206

DHH, Human

Cat. No.: Z03234-50

Size: 50.0 ug

Synonyms: DHH, Human

Description:

Desert hedgehog protein (DHH) is a member of the Hedgehog family which encodes signaling molecules that play an important role in regulating morphogenesis. It is predicted to be made as a precursor that is auto-catalytically cleaved; the N-terminal portion is soluble and contains the signaling activity while the C-terminal portion is involved in precursor processing. More importantly, 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 this protein have been associated with partial gonadal dysgenesis (PGD) accompanied by minifascicular polyneuropathy. DHH may be involved in both male gonadal differentiation and perineurial development. DHH binds both Patched and Patched 2 as well as Hedgehog interacting protein (Hip). It induces steroidogenic factor 1(SF1), which is instrumental in promoting Leydig cell differentiation. It also promotes the deposition of basal lamina surrounding seminiferous tubules.
Recombinant human Desert hedgehog (DHH) produced in *Escherichia Coli* is a single non-glycosylated polypeptide chain containing 177 amino acids. A fully biologically active molecule, rhDHH has a molecular mass of around 20kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 IIGPGRGPVG RRRYARKQLV PLLYKQFVPG VPERTLGASG
00041 PAEGRVARGS ERFRDLVPNY NPDIIFKDEE NSGADRLMTE
00081 RCKERVNALA IAVMNMWPGV RLRVTEGWDE DGHHAQDSLH
00121 YEGRALDITT SDRDRNKYGL LARLAVEAGF DWVYYESRNH
00161 VHVSVKADNS LAVRAGG
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Source: *E. coli*

Species: Human

Biological Activity: ED_{50} < 10μg/, measured by its ability to induce alkaline phosphatase production by CCL-226 cells, corresponding to a specific activity of > 100 units/mg.

Molecular Weight: 20 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH_2O at 100 μg/mL.

Purity: > 95% by SDS-PAGE and HPLC analyses.

Endotoxin Level: < 0.2 EU/μg, determined by LAL method.

Storage: Lyophilized recombinant Human Hedgehog homolog(rhDHH) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhDHH remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.

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