

DATASHEET
Version 20181206**DHH, Mouse****Cat. No.:** Z03245-50**Size:** 50.0 ug**Synonyms:** DHH, Desert Hedgehog, HHG-3**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 mouse Desert Hedgehog (DHH) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 176 amino acids. A fully biologically active molecule, rmDHH has a molecular mass of 20.1 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 IIGPGRGPVG RRRYVRKQLV PLYKQFVPS MPERTLGASG
00041 PAEGRVTRGS ERFRDLVPNY NPDIFKDEE NSGADRLMTE
00081 RCKERVNALA IAVNMWPGV RLRVTEGWDE DGHHAQDSLH
00121 YEGRALDITT SDRDRNKYGL LARLAVEAGF DWVYYESRNH
00161 IHVSVKADNS LAVRAGG
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Source: *E. coli***Species:** Mouse**Biological Activity:** ED₅₀ <20 µg/ml, measured by its ability to induce alkaline phosphatase production by CCL-226 cells.**Molecular Weight:** 20.1 kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH₂O or PBS at 100 µg/ml.**Purity:** > 98% as analyzed by SDS-PAGE and HPLC.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant Mouse Desert Hedgehog (DHH) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Mouse Desert Hedgehog (DHH) should be stable up to 1 week at 4°C or up to 2 months at -20°C.