

Recombinant Human HHG-3/DHH Protein

Catalog No.: RP01758

Sequence Information

Species **Gene ID**
Human 50846

Swiss Prot **Tags**
O43323 N-6His

Synonyms

GDMN; GDXYM; HHG-3; SRXY7;
HHG-3;DHH

Product Information

Source **Purification**
E. coli ≥ 95 % as
determined by
SDS-PAGE.

Calculated MW

20.57 kDa 24-25 kDa

Endotoxin

< 1 EU/μg of the protein by LAL
method.

Formulation

Lyophilized from a 0.22 μm filtered
solution of PBS, 1mM DTT, pH 7.4.

Reconstitution

Centrifuge the vial before opening.
Reconstitute to a concentration of
0.1-0.5 mg/mL in sterile distilled
water. Avoid vortex or vigorously
pipetting the protein. For long
term storage, it is recommended
to add a carrier protein or stabilizer
(e.g. 0.1% BSA, 5% HSA, 10% FBS
or 5% Trehalose), and aliquot the
reconstituted protein solution to
minimize free-thaw cycles.

Background

Desert Hedgehog (Dhh) belongs to the highly conserved Hedgehog family of proteins which are involved in multiple developmental processes. Desert Hedgehog is a secreted, 45 kDa, 373 amino acid (aa) protein that undergoes autocatalytic cleavage between Gly198 and Cys199 catalyzed by the C-terminal domain, which releases the N-terminal domain with a concomitant attachment of cholesterol at its new C-terminus. In addition to the C-terminally attached cholesterol, a fatty acid acyl chain is esterified to the N-terminal cysteine (aa 23) via an amide linkage. The 19 kDa N-terminal signaling domain is membrane associated due to its double lipid modifications. Its binding to Patched receptors results in the loss of Patched repression of Smoothened signaling (1 - 4). Dhh binds both Patched and Patched 2 as well as Hedgehog interacting protein (Hip) (5). Within the N-terminal domain, human Dhh shares 97% aa sequence identity with mouse and rat Dhh. It shares approximately 75% aa sequence identity with human Indian (Ihh) and Sonic Hedgehog (Shh) (5). Dhh is produced by Sertoli cells and is required for testis development and spermatogenesis (6, 7). It induces steroidogenic factor 1, which is instrumental in promoting Leydig cell differentiation (8, 9).

Basic Information

Description

Recombinant Human HHG-3/DHH Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Cys23-Gly198) of human HHG-3/DHH (Accession #NP_066382.1) fused with a 6×His tag at the N-terminus.

Activity

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

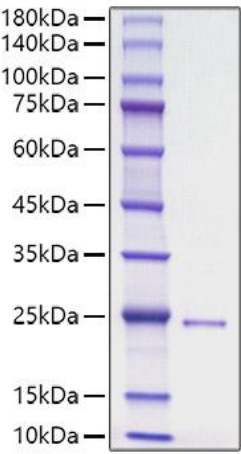
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Validation Data



Recombinant Human HHG-3/DHH Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.