

Recombinant Human NOG Protein, Fc-tagged

Cat. No. NOG-401H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant human NOG protein with Fc tag was expressed in HEK293.

Species Human

Source HEK293

ProteinLength 232

Description

The secreted polypeptide, encoded by this gene, binds and inactivates members of the transforming growth factor-beta (TGF-beta) superfamily signaling proteins, such as bone morphogenetic protein-4 (BMP4). By diffusing through extracellular matrices more efficiently than members of the TGF-beta superfamily, this protein may have a principal role in creating morphogenic gradients. The protein appears to have pleiotropic effect, both early in development as well as in later stages. It was originally isolated from *Xenopus* based on its ability to restore normal dorsal-ventral body axis in embryos that had been artificially ventralized by UV treatment. The results of the mouse knockout of the ortholog suggest that it is involved in numerous developmental processes, such as neural tube fusion and joint formation. Recently, several dominant human NOG mutations in unrelated families with proximal symphalangism (SYM1) and multiple synostoses syndrome (SYNS1) were identified; both SYM1 and SYNS1 have multiple joint fusion as their principal feature, and map to the same region (17q22) as this gene. All of these mutations altered evolutionarily conserved amino acid residues. The amino acid sequence of this human gene is highly homologous to that of *Xenopus*, rat and mouse.

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Form	Lyophilized
Molecular Mass	49.8 kDa
AA Sequence	MERCPSLGVTLYALVVVLGLRATPAGGQHYLHIRPAPSDNLPLVDLIEHPDPIFDPKE KDLNETLLRSLGHHYDPGFMATSPPEDRPGGGGGAAGGAEDLAELDQLLRQRPS GAMPSEIKGLEFSEGLAQGKKQRLSKLRRKLMWLWSQTFCPVLYAWNDLGSRF WPRYVKVGSCFSKRSCSVPEGMVCKPSKSVHLTVLRWRCQRRGGQRCGWIPQY PIISECKCSC
Purity	> 98%
Applications	WB; ELISA; FACS; FC
Stability	This bioreagent is stable at 4 centigrade (short-term) and -70 centigrade(long-term). After reconstitution, sample may be stored at 4 centigrade for 2-7 days and below -18 centigrade for future use.
Storage	At -20 centigrade.
Concentration	1 mg/mL
Storage Buffer	PBS (pH 7.4-7.5). Sterile-filtered colorless solution.
Reconstitution	Reconstitute in sterile distilled H ₂ O to no less than 100 µg/mL; dilute reconstituted stock further in other aqueous solutions if needed. Please review COA for lot-specific instructions. Final measurements should be determined by the end-user for optimal performance.

GENE INFORMATION

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Gene Name	NOG noggin [Homo sapiens (human)]
Official Symbol	NOG
Synonyms	NOG; noggin; SYM1, symphalangism 1 (proximal) , synostoses (multiple) syndrome 1 , SYNS1; symphalangism 1 (proximal); SYM1; SYNS1;
Gene ID	9241
mRNA Refseq	NM_005450
Protein Refseq	NP_005441
MIM	602991
UniProt ID	Q13253

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