

Recombinant Human NOG Protein, His-tagged

Cat. No. NOG-13H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human Noggin (28-232 aa), fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.
Species	Human
Source	HEK293
ProteinLength	211
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 <i>Xenopus</i> 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

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	acid residues. The amino acid sequence of this human gene is highly homologous to that of Xenopus, rat and mouse.
Form	Liquid
Molecular Mass	23.8 kDa
AA Sequence	QHYLHIRPAPSDNLPLVDLIEHPDPIFDPKEKDLNETLLRSLLGGHYDPGFMATSPPE DRPGGGGGGAAGGAEDLAELDQLLRQRPSPGAMPSEIKGLEFSEGLAQGKKQRLSKK LRRKLQMWLWSQTFCPVLYAWNDLGSRFWPRYVKVGSCFSKRSCSVPEGMVCKP SKSVHLTVLRWRCQRRGGQRCGWIPYPIISECKCSC
Endotoxin	< 1 EU/μg of protein (determined by LAL method)
Purity	> 95% by SDS-PAGE
Applications	SDS-PAGE
Storage	Can be stored at +2 to +8 centigrade for 1 week. For long term storage, aliquot and store at -20 to -80 centigrade. Avoid repeated freezing and thawing cycles.
Concentration	0.25 mg/mL (determined by Absorbance at 280nm)
Storage Buffer	50mM MES buffer (pH 6.5) containing 30% glycerol

GENE INFORMATION

Gene Name	NOG noggin [Homo sapiens (human)]
Official Symbol	NOG

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Synonyms	NOG; noggin; SYM1; SYNS1; SYNS1A; noggin; symphalangism 1 (proximal)
Gene ID	9241
mRNA Refseq	NM_005450
Protein Refseq	NP_005441
MIM	602991
UniProt ID	Q13253

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