

## Recombinant Full Length Human NOG Protein, GST-tagged

Cat. No. NOG-6681HF    Lot. No. (See product label)

### SPECIFICATION

**Product Overview**      Human NOG full-length ORF ( AAH34027, 28 a.a. - 232 a.a.) recombinant protein with GST-tag at N-terminal.

**Species**                      Human

**Source**                        In Vitro Cell Free System

**ProteinLength**              232 amino acids

#### 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

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	that of Xenopus, rat and mouse. [provided by RefSeq]
<b>Molecular Mass</b>	48.29 kDa
<b>AA Sequence</b>	QHYLHIRPAPSDNLPLVLDLIEHPDPIFDPKEKDLNETLLRSLGHHYDPGFMATSPPE DRPGGGGGAAGGAEDLAELDQLLRQRPSGAMPSEIKGLEFSEGLAQGKKQRLSKK LRRKLMWLWSQTFPCVLYAWNDLGSRFWPRYVKVGSCFSKRSCSVPEGMVCKP SKSVHLTVLRWRCQRRGGQRCGWIPYPIISECKCSC
<b>Applications</b>	Enzyme-linked Immunoabsorbent Assay Western Blot (Recombinant protein) Antibody Production Protein Array
<b>Notes</b>	Best use within three months from the date of receipt of this protein.
<b>Storage</b>	Store at -80 centigrade. Aliquot to avoid repeated freezing and thawing.
<b>Storage Buffer</b>	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	NOG <i>noggin</i> [ <i>Homo sapiens</i> ]
<b>Official Symbol</b>	NOG
<b>Synonyms</b>	NOG; <i>noggin</i> ; SYM1, symphalangism 1 (proximal) , synostoses (multiple) syndrome 1 , SYNS1; symphalangism 1 (proximal); SYM1; SYNS1;
<b>Gene ID</b>	9241

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<b>mRNA Refseq</b>	NM_005450
<b>Protein Refseq</b>	NP_005441
<b>MIM</b>	602991
<b>UniProt ID</b>	Q13253

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