# NOG (Human) Recombinant Protein

Catalog # P8973 Size 20 ug

## Specification

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| **Product Description** | Human NOG (Q13253) recombinant protein expressed in *Escherichia coli*. |
| **Sequence** | MQHYLHIRPAPSDNLPLVDLIEHPDPIFDPKEKDLNETLLRSLLGGHYDPGFMATSPPEDRPGGG GGAAGGAEDLAELDQLLRQRPSGAMPSEIKGLEFSEGLAQGKKQRLSKKLRRKLQMWLWSQTF CPVLYAWNDLGSRFWPRYVKVGSCFSKRSCSVPEGMVCKPSKSVHLTVLRWRCQRRGGQRC GWIPIQYPIISECKCSC. |
| **Host** | Escherichia coli |
| **Theoretical MW (kDa)** | 64.3 |
| **Form** | Lyophilized |
| **Preparation Method** | *Escherichia coli* expression system |
| **Purity** | > 95% by SDS PAGE |
| **Storage Buffer** | Lyophilized from 30% CH3CN, 0.1% TFA. |
| **Storage Instruction** | Store, frozen at -20°C for longer periods of time.<br>For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).<br>Avoid multiple freeze-thaw cycles. |

## Applications

- Functional Study
- SDS-PAGE

## Gene Info — NOG

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| **Entrez GeneID** | 9241 |

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| **Protein Accession#** | Q13253 |
| **Gene Name** | NOG |
| **Gene Alias** | SYM1, SYNS1 |
| **Gene Description** | noggin |
| **Omim ID** | 184460 185800 186500 186570 602991 |
| **Gene Ontology** | Hyperlink |
| **Gene Summary** | 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. [provided by RefSeq |
| **Other Designations** | symphalangism 1 (proximal) |

## Pathway

- TGF-beta signaling pathway

## Disease

- Diabetes Mellitus
- Genetic Predisposition to Disease
- Neural Tube Defects
- Obesity
- Osteoporosis
- Ovarian Failure

- Polycystic Ovary Syndrome
- Puberty
- Thrombophilia
- Tobacco Use Disorder