

Bioactive

# NOG (Human) Recombinant Protein

Catalog # P7390

Size 10 ug

## Applications

### Result of activity analysis

Result of activity analysis

□

## Specification

Product Description	Human NOG (Q13253, 28 a.a. - 232 a.a.) partial recombinant protein expressed in CHO cells.
Sequence	QHYLHIRPAPSDNLPLVDLIEHPDPIFDPKEDLNETLLRSLLGGHYDPGFMATSPPEDRPGGGGG AAGGAEDLAELDQLLRQRPSPGAMPSEIKGLEFSEGLAQGKKQRLSKKLRRKLQMWLWSQTFCP VLYAWNDLGSRFWPRYVKVGSCFSKRSCSVPEGMVCKPSKSVHLTVLRWRCQRRGGQRCGWI PIQYPIISECKCSC
Host	Mammals
Theoretical MW (kDa)	29 ~ 31
Form	Lyophilized
Preparation Method	_x005F_x000D__x000D_ Mammalian cell (CHO) expression system_x005F_x000D__x000D_
Purity	> 95% as analyzed by SDS-PAGE.
Endotoxin Level	< 0.2 EU/ ug of protein (gel clotting method)
Activity	ED <sub>50</sub> < 2.5 ng/mL, measured in a bioassay using ATDC5 cells in the presence of 10 ng/mL human B MP4.

**Recommend Usage**

Biological Activity  
SDS-PAGE  
The optimal working dilution should be determined by the end user.

**Storage Buffer**

Lyophilized from PBS. Reconstitute the lyophilized powder in ddH<sub>2</sub>O up to 100 ug/mL.

**Storage Instruction**

Store at 4°C for 1 week. For long term storage store at -20°C to -80°C.  
Aliquot to avoid repeated freezing and thawing.

**Note**

Result of activity analysis  
Result of activity analysis

## Applications

- Functional Study
- SDS-PAGE

## Gene Info — NOG

**Entrez GeneID**[9241](#)**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 knock out 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](#)