Bioactive CellTx™ Sm Size

NOG (Human) Recombinant Protein

Catalog # P9957 Size 100 ug, 20 ug

Specification

Regulatory Status	RUO grade
Product Description	Human NOG recombinant protein with Human IgG1 Fc tag at the C-terminus expressed in *Escherichia coli*.
Host	Escherichia coli
Theoretical MW (kDa)	Calculated MW: 49.11
Form	Lyophilized
Preparation Method	*Escherichia coli* expression system
Purity	> 98% by SDS-PAGE
Endotoxin Level	< 0.1 EU/ug
Activity	The ED_{50} for this effect is < 0.05 ug/mL in the presence of 50 ng/mL of recombinant human BMP-4, measured by its ability to inhibit BMP-4-induced alkaline phosphatase production by ATDC5 cells.
Recommend Usage	SDS-PAGE The optimal working dilution should be determined by the end user.
Storage Buffer	Lyophilized from PBS, pH 7.4. Reconstitute the lyophilized protein in sterile H_2O to a concentration of at least 200 ug/mL and incubate the stock solution for at least 20 min to ensure sufficient redissolution. Please use the protein within one month after reconstitution.
Storage Instruction	Store at -20°C for 12 months in lyophilized state. After reconstitution with deionized water, store at -20 or -80°C for 1 month. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- SDS-PAGE

Gene Info — NOG

Entrez GeneID	9241
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

Copyright © 2023 Abnova Corporation. All Rights Reserved.

- Obesity
- Osteoporosis
- Ovarian Failure
- Polycystic Ovary Syndrome
- Puberty
- Thrombophilia
- Tobacco Use Disorder

Copyright © 2023 Abnova Corporation. All Rights Reserved.