Bioactive

NOG (Human) Recombinant Protein

Catalog # P8975 Size 2 x 10 ug

Specification

Product Description	Human NOG (Q13253) recombinant protein expressed in *Baculovirus*.
Sequence	QHYLHIRPAPSDNLPLVDLIEHPDPIFDPKEKDLNETLLRSLLGGHYDPGFMATSPPEDRPGGGGG AAGGAEDLAELDQLLRQRPSGAMPSEIKGLEFSEGLAQGKKQRLSKKLRRKLQMWLWSQTFCP VLYAWNDLGSRFWPRYVKVGSCFSKRSCSVPEGMVCKPSKSVHLTVLRWRCQRRGGQRCGWI PIQYPIISECKCSC.
Host	Nicotiana benthamiana
Theoretical MW (kDa)	47.9
Form	Lyophilized
Preparation Method	*Baculovirus* expression system
Purity	> 95% by HPLC and SDS PAGE
Activity	Measured by the ability to inhibit BMP-4-induced alkaline phosphatase production by ATDC5 mouse chondrogenic cellsans was fount to be 0.04-0.2 ug/mL in the presence of 50 ng/mL of Recombinant Human BMP-4.
Storage Buffer	Lyophilized from PBS, pH7.4 and 0.02 % Tween-20 and 5% trehalose.
Storage Instruction	Store at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles.

Applications

- Functional Study
- SDS-PAGE

Gene Info — NOG

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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 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

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

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