

RP00429

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Recombinant Human Noggin/NOG Protein

Catalog No.: RP00429

Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
Human	9241	Q13253

Tags

N-8×His & Flag

Synonyms

NOG;SYM1;SYNS1;SYNS1A;noggin

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Endotoxin

< 1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 500 mM NaCl, 2 mM EDTA, pH7.4. Contact us for customized product form or formulation.

Reconstitution

Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water.

Background

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.

Basic Information

Description

Recombinant Human Noggin/NOG Protein is produced by Human cell expression system. The target protein is expressed with sequence (Gln28-Cys232) of human Noggin/NOG (Accession #Q13253) fused with an 8×His, Flag tag at the N-terminus.

Bio-Activity

Measured by its ability to inhibit BMP-4-induced alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED₅₀ for this effect is 0.04-0.2 μg/mL in the presence of 50 ng/mL of Recombinant Human BMP-4.

Storage

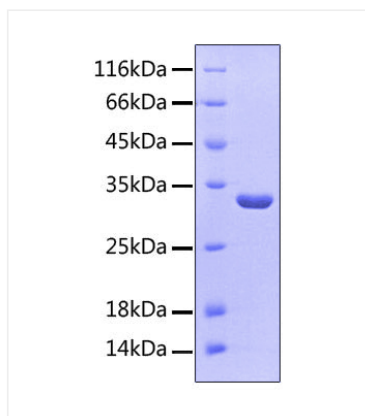
Store the lyophilized protein at -20°C to -80 °C for long term. After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week. Avoid repeated freeze/thaw cycles.

Contact



www.abclonal.com

Validation Data



Recombinant protein Human Noggin/NOG was determined by SDS-PAGE under reducing conditions with Coomassie Blue, showing a band at 33 kDa.