

32-6507: Noggin Human, Sf9

Alternative Name : Noggin, Symphalangism 1 (Proximal), Synostoses (Multiple) Syndrome 1, SYNS1A, SYNS1, SYM1.

Description

Source: Sf9, Insect cells.

Sterile filtered colorless solution.

The secreted polypeptide noggin, encoded by the NOG 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, noggin may have a principal role in creating morphogenic gradients. Noggin 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 noggin 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 NOG. All NOG mutations altered evolutionarily conserved amino acid residues. The amino acid sequence of human noggin is highly homologous to that of *Xenopus*, rat and mouse.

Noggin produced in Sf9 Insect cells is a single, glycosylated polypeptide chain containing 211 amino acids (28-232a.a.) and having a molecular mass of 23.8kDa. (Molecular size on SDS-PAGE will appear at approximately 28-40kDa). Noggin is expressed with a 6 amino acid His tag at C-Terminus and purified by proprietary chromatographic techniques.

Product Info

Amount :	1 µg / 5 µg
Purification :	Greater than 90.0% as determined by SDS-PAGE.
Content :	Noggin a protein solution (0.25mg/ml) contains phosphate buffered saline (pH7.4) and 10% glycerol.
Storage condition :	Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.
Amino Acid :	QHYLHIRPAP SDNLPLVDLI EHPDPIFDPK EKDLNETLLR SLLGGHYDPG FMATSPPEDR PGGGGGAAGG AEDLAELDQL LRQRPSGAMP SEIKGLEFSE GLAQGKKQRL SKKLRRKLQM WLWSQTFCPV LYAWNLDLGSF FWPRYVKVGS CFSKRSCSVP EGMVCKPSKS VHLTVLRWRC QRRGGQRCGW IPIQYPIISE CKCSCHHHHH H.