

Noggin Human Recombinant Protein

Catalog Number: PROTQ13253-1

Introduction

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.

Overview

Product Name	Noggin Human Recombinant Protein
Description	Noggin Human Recombinant produced in E.Coli is a non-glycosylated, non-disulfide-linked homodimer consisting of two 206 amino acid polypeptide chains, having a total molecular mass of approximately 46.2 kDa (each chain 23.1 kDa). Noggin is purified by proprietary chromatographic techniques.
Size	5ug, 20ug, 1mg
Tag	
Form	Sterile Filtered White lyophilized (freeze-dried) powder.
Source	E. Coli
Formulation	Lyophilized from a 0.2um filtered solution in 30% CH3CN, 0.1% TFA.

Concentration

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Amino Acid Sequence

MQHYLHIRPAPSDNLPLVDLIEHPDPIFDPKKDLNETLLRSLGGHYDPGFMATSPPEDRPGGGGGAAGGAEDLAELDQLLRQPSGAMPSEIKGLEFS
EGLAQGKKQRLSKKLRRKLQMWLWSQTFCPVLYAWNDLGSRFWPRYVKVGSCFSKRSCSVPEGMVCKPSKSVHLTVLRWRCQRRGGQRCGWIPQ
YPIISECKCSC. [?/description_after_attributes?](#)

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