9051 Mira Mesa Blvd, #910094
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Noggin Mouse

Noggin Mouse Recombinant
GRF0279

Product Overview

Name	Noggin Mouse
Description	
Noggin Mouse Recombinant	
Accession (Primary)	P97466
Synonyms	
Noggin, SYM1, SYNS1, NOG.	

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.

Source

Escherichia Coli.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 μm filtered solution in 30% acetonitrile, 0.1% TFA.

Stability

Lyophilized Mouse Noggin although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Mouse Noggin should be stored at 4°C between 2-7 days and for future use below -18°C.

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For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Amino acid sequence

MQHYLHIRPAPSDNLPLVDLIEHPDPIFDPKEKDLNETLLRSLLGGHYD
PGFMATSPPEDRPGGGGGPAGGAEDLAELDQLLRQRPSGAMPSEIKG
LEFSEGLAQGKKQRLSKKLRRKLQMWLWSQTFCPVLYAWNDLGSRF
WPRYVKVGSCFSKRSCSVPEGMVCKPSKSVHLTVLRWRCQRRGQR CGWIPIQYPIISECKCSC.

Biological Activity

The ED 50 as determined by inhibiting BMP-4-induced alkaline phosphatase production of murine ATDC5 cells is less than 2ng/ml, corresponding to a specific activity of > 5.0 × 10 5 IU/mg in the presence of 5ng/ml BMP-4.

Solubility

It is recommended to be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 10mM HAc to a concentration of 0.1-1.0 mg/ml. Further dilutions should be made in appropriate buffered solutions.

Precautions

Noggin Mouse is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P97466)