Recombinant human Noggin protein

Catalog Number: ATGP4020

PRODUCT INFORMATION

Expression system
HEK293

Domain
28-232aa

UniProt No.
Q13253

NCBI Accession No.
NP_005441.1

Alternative Names
SYM1, SYNS1, SYNS1A, NOG, symphalangism 1, synostoses syndrome 1

PRODUCT SPECIFICATION

Molecular Weight
23.8kDa (211aa)

Concentration
0.25mg/ml (determined by Bradford assay)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity
> 95% by SDS - PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Measured by ability to inhibit BMP-4-induced alkaline phosphatase production by ATDC5 mouse chondrogenic cells in the presence of 50ng/ml of human BMP-4. The ED50 range ≤ 0.5 ug/ml.

Tag
His-Tag

Application
SDS-PAGE, Bioactivity

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Recombinant human Noggin protein

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Description

NOG, also known as noggin, is a secreted protein that is involved in the development of many body tissues, including nerve tissue, muscles, and bones and is known to exert its effects by inhibiting the bone morphogenetic protein (BMP) -signaling pathway. It binds some BMPs such as BMP-4 with high affinity and others such as BMP-7 with lower affinity. This protein is an inhibitor of several bone morphogenetic proteins and cysteine-knot region of human Noggin are linked to multiple types of skeletal dysplasias that result in apical joint fusions. It also plays a key role in neural induction by inhibiting BMP4, along with other TGF-beta signaling inhibitors. Recombinant human Noggin, fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

Amino acid Sequence

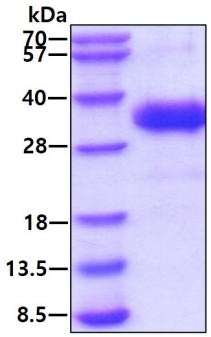
QHYLHIRPAP SDNLPLVDLI EHPDPIFDPK EKDLNETLLR SLLGGHYDPG FMATSPPEDR PGGGGGAAGG AEDLAELDQL LRQRPSGAMP SEIKGLEFSE GLAQGKKQRL SKKLRRKLQM WLWSQTFCPV LYAWNDLGSR FWPRYVKVGS CFSKRSCSVP EGMVCKPSKS VHLTVLRWRC QRRGGQRCGW IPIQYPIISE CKCSC<HHHHH H>

General References

Zimmerman LB., et al, (1996) Cell. 86:599-606.
Groppe J., et al, (2002) Nature. 420:636-642.

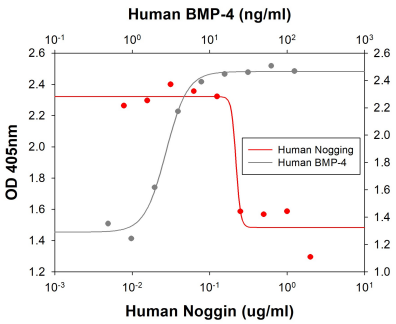
DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

Biological Activity



Human Nogging inhibit alkaline phosphatase production in the ATDC5 mouse chondrogenic cells in the presence of 50ng/ml of human BMP-4. The ED50 range ≤ 0.5 ug/ml.