

Noggin/NOG Active Protein | NOG active protein

Noggin/NOG Protein, Human, Recombinant (hFc Tag)

CATALOG #
AAA257860

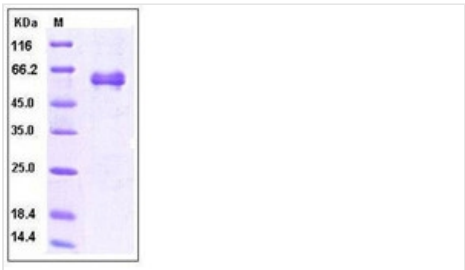
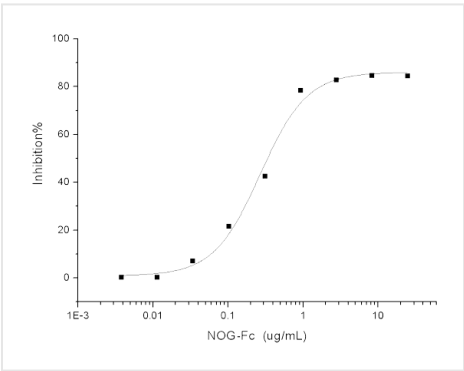
HOST
HEK293 Cells

PRODUCT SYNONYMS

Noggin/NOG; Noggin/NOG Protein; Human; Recombinant (hFc Tag); Human Noggin/NOG Protein (Fc Tag); Noggin Protein; SYM1 Protein; SYNS1 Protein; noggin; NOG active protein

PRODUCT SPECIFICATIONS

Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE
Form/Format	Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH7.5. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Sequence	Met1-Cys23 2
Species	Human
Activity	1. Measured by its ability to inhibit BMP2-induced alkaline phosphatase production by MC3T3-E1 cells. The ED50 for this effect is typically 1.5-2.0 ug /mL in the presence of 0.25-0.5ug/mL of BMP-2. 2. Measured by its ability to inhibit BMP4-induced alkaline phosphatase production by MC3T3-E1 cells. The ED50 for this effect is typically 0.1-0.6ug/mL in the presence of 50ng/mL of hBMP4.
Endotoxin	<1.0EU per ug of the protein as determined by the LAL method
Predicted N Terminal	Gln 28
Tag	C-human IgG1-Fc
Protein Construction	A DNA sequence encoding the human Noggin precursor (NP_005441.1)(Met 1-Cys 232) was fused with the Fc region of human IgG1 at the C-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.



SDS-PAGE

Application Data
Measured by its ability to inhibit BMP4-induced alkaline phosphatase production by MC3T3-E1 cells. The ED50 for this effect is typically 0.1-0.6 ug/mL in the presence of 50 ng/mL of hBMP4.

ADDITIONAL INFORMATION

Related Product Information for NOG active protein	Background: Noggin is a secreted protein involved at multiple stages of vertebrate embryonic development including neural induction and is known to exert its effects by inhibiting the bone morphogenetic protein (BMP)-signaling pathway. It binds several BMPs with very high (picomolar) affinities, with a marked preference for BMP2 and BMP4 over BMP7. By binding tightly to BMPs, Noggin prevents BMPs from binding their receptors. Noggin binds the bone morphogenetic proteins (BMP) such as BMP-4 and BMP-7 and inhibits BMP signaling by blocking the molecular interfaces of the binding epitopes for both types I and type II receptors. Interaction of BMP and its antagonist Noggin governs various developmental and cellular processes, including embryonic dorsal-ventral axis, induction of neural tissue, the formation of joints in the skeletal system, and neurogenesis in the adult brain. Noggin plays a key role in neural induction by inhibiting BMP4, along with other TGF-beta signaling inhibitors such as chordin and follistatin. Mouse knockout experiments have demonstrated that noggin also plays a crucial role in bone development, joint formation, and neural tube fusion.
References	Zimmerman LB, et al. (1996) The Spemann organizer signal noggin binds and inactivates bone morphogenetic protein 4. Cell. 86(4): 599-606.Chandramore K, et al. (2010) Cloning of noggin gene from hydra and analysis of its functional conservation using Xenopus laevis embryos. Evol Dev. 12(3): 267-74.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4885523
NCBI GeneID	9241
NCBI Accession #	NP_005441.1
NCBI GenBank Nucleotide #	NP_005441.1
UniProt Accession #	Q13253
NCBI Official Full Name	noggin
NCBI Official Synonym Full Names	noggin
NCBI Official Symbol	NOG
NCBI Official Synonym Symbols	SYM1; SYNS1; SYNS1A
NCBI Protein Information	noggin
UniProt Protein Name	Noggin
UniProt Gene Name	NOG
UniProt Entry Name	NOGG_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/hek293-active-protein/noggin-nog/257860>