Datasheet for ABIN7317939

NOG Protein (Fc Tag)

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Overview

Quantity:	100 µg
Target:	NOG
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This NOG protein is labelled with Fc Tag.

Product Details

Purpose:	Recombinant Human Noggin/NOG Protein (aa 1-232, Fc Tag)(Active)
Sequence:	Met 1-Cys 232
Characteristics:	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.
Purity:	> 95 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.
Biological Activity Comment:	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 µg /mL in the presence of 0.25-0.5 µg/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 0.1-0.6 µg/mL in the presence of 50 ng/mL of hBMP4.

Target Details

Target:	NOG
Alternative Name:	Noggin/NOG (NOG Products)
Background:	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 type 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; 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-β 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. Synonym: Noggin;SYM1;SYNS1
Molecular Weight:	49.8 kDa
NCBI Accession:	NP_005441
Pathways:	Stem Cell Maintenance, Tube Formation

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile 100 mM Glycine, 10 mM NaCl, 50 mM Tris, pH 7.5
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.