Datasheet for ABIN7520369

NOG Protein (His tag)

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Overview

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

Product Details

Purpose:	Active Recombinant Mouse Noggin/NOG Protein
Sequence:	QHYLHIRPAP SDNLPLVDLI EHPDPIFDPK EKDLNETLLR SLLGGHYDPG FMATSPPEDR PGGGGGPAGG AEDLAELDQL LRQRPSGAMP SEIKGLEFSE GLAQGKKQRL SKKLRRKLQM WLWSQTFCPV LYAWNDLGSR FWPRYVKVGS CFSKRSCSVP EGMVCKPSKS VHLTVLRWRC QRRGGQRCGW IPIQYPIISE CKCSC
Specificity:	Gln28-Cys232
Purity:	> 95 % by SDS-PAGE.
Sterility:	0.22 µm filtered
Biological Activity Comment:	1.Measured by its binding ability in a functional ELISA.Immobilized Human BMP4 at 0.5 µg/mL (100 µL/well) can bind Noggin with a linear range of 4-29 ng/mL.|2.Measured by its binding ability in a functional ELISA.Immobilized Human Noggin at 1 µg/mL (100 µL/well) can bind Noggin Rabbit pAb with a linear range of 1-4.95 ng/mL.|3.Measured by its ability to inhibit BMP-

Product Details

	4-induced alkaline phosphatase production by ATDC5 mouse chondrogenic cells. The ED_{50} for this effect is 3.5-14 ng/mL in the presence of 50 ng/mL of Recombinant Human BMP-4.

Target Details

Target:	NOG
Alternative Name:	Noggin/NOG (NOG Products)
Background:	Description: 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-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. Name: noggin,NOG
Gene ID:	18121
UniProt:	P97466
Pathways:	Stem Cell Maintenance, Tube Formation

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid votex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1 % BSA, 5 % HSA, 10 % FBS or 5 %

Handling

	Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.
Buffer:	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Storage:	-20 °C,-80 °C
Storage Comment:	Store the lyophilized protein at -20°C to -80°C for long term.|After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.