Datasheet for ABIN2181545

NOG Protein (AA 28-232) (Fc Tag)

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Overview

Quantity:	100 µg
Target:	NOG
Protein Characteristics:	AA 28-232
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This NOG protein is labelled with Fc Tag.

Product Details

Sequence:	AA 28-232
Characteristics:	This protein carries a human IgG1 Fc tag at the C-terminus. The protein has a calculated MW of 49.8 kDa. The protein migrates as 58-62 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Purity:	>95 % as determined by SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	NOG
Alternative Name:	Noggin (NOG Products)

Target Details

Background:	Noggin is also known as NOG,SYM1, SYNS1 and is a secreted homodimeric glycoprotein whose scaffold contains a cystine-knot topology similar to that of BMPs.Secreted Noggin probably remains close to the cell surface due to its binding of heparincontaining proteoglycans.Noggin inhibits TGF-β signal transduction by binding to TGF-β family ligands and preventing them from binding to their corresponding receptors. 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. During embryogenesis, Noggin antagonizes specific BMPs at defined times, for example, during neural tube, somite and cardiomyocyte growth and patterning. During skeletal development, Noggin prevents chondrocyte hyperplasia, thus allowing proper formation of joints. During culture of human embryonic stem cells (hESC) or neural stem cells under certain conditions, addition of Noggin to antagonize BMP activity may allow stem cells to proliferate while maintaining their undifferentiated state, or alternatively, to differentiate into dopaminergic neurons Noggin also appears to maintain adult stem cell populations in vivo, for example, maintaining neural stem cells within the hippocampus.
Molecular Weight:	49.2 kDa
NCBI Accession:	NP_005441
Pathways:	Stem Cell Maintenance, Tube Formation

Application Details

Restrictions:	For Research Use only

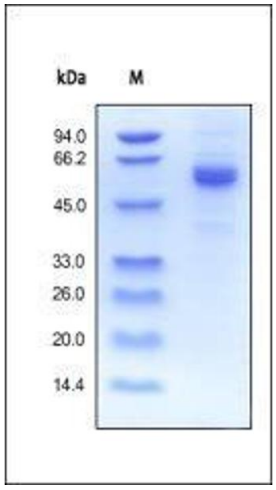
Handling

Format:	Lyophilized
Buffer:	50 mM Tris, 100 mM Glycine, pH 7.5
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C
Storage Comment:	No activity loss was observed after storage at: In lyophilized state for 1 year (4 °C-8 °C), After reconstitution under sterile conditions for 1 month (4 °C-8 °C) or 3 months (-20 °C to -70 °C).

Publications

Product cited in:	Ye, Ge, Zhang, Cheng, Zhang, He, Wang, Lin, Yang, Liu, Zhao, Deng: "Pluripotent stem cells induced from mouse neural stem cells and small intestinal epithelial cells by small molecule compounds." in: **Cell research**, Vol. 26, Issue 1, pp. 34-45, (2016) (PubMed).

Images



SDS-PAGE

Image 1. Human Noggin, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.