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NOG Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18131c

Product Information

Application	WB, E
Primary Accession	Q13253
Other Accession	Q62809, P97466, NP_005441.1
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21954
Calculated MW	25774
Antigen Region	84-111

Additional Information

Gene ID	9241
Other Names	Noggin, NOG
Target/Specificity	This NOG antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 84-111 amino acids from the Central region of human NOG.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NOG Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NOG
Function	Inhibitor of bone morphogenetic proteins (BMP) signaling which is required for growth and patterning of the neural tube and somite. Essential for cartilage morphogenesis and joint formation. Inhibits chondrocyte

differentiation through its interaction with GDF5 and, probably, GDF6 (PubMed:21976273, PubMed:26643732).

Cellular Location Secreted.

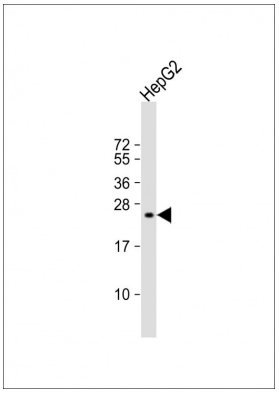
Background

The secreted polypeptide, encoded by this gene, binds and inactivates members of the transforming growth factor-beta (TGF-beta) superfamily signaling proteins, such as bone morphogenetic protein-4 (BMP4). By diffusing through extracellular matrices more efficiently than members of the TGF-beta superfamily, this protein may have a principal role in creating morphogenic gradients. The protein appears to have pleiotropic effect, both early in development as well as in later stages. It was originally isolated from Xenopus based on its ability to restore normal dorsal-ventral body axis in embryos that had been artificially ventralized by UV treatment. The results of the mouse knockout of the ortholog suggest that it is involved in numerous developmental processes, such as neural tube fusion and joint formation. Recently, several dominant human NOG mutations in unrelated families with proximal symphalangism (SYM1) and multiple synostoses syndrome (SYNS1) were identified; both SYM1 and SYNS1 have multiple joint fusion as their principal feature, and map to the same region (17q22) as this gene. All of these mutations altered evolutionarily conserved amino acid residues. The amino acid sequence of this human gene is highly homologous to that of Xenopus, rat and mouse.

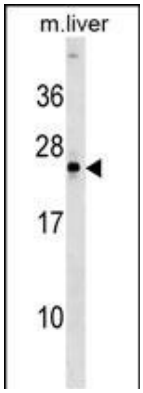
References

Rudnik-Schoneborn, S., et al. Am. J. Med. Genet. A 152A (6), 1540-1544 (2010) :
Song, K., et al. J. Biol. Chem. 285(16):12169-12180(2010)
Mangold, E., et al. Nat. Genet. 42(1):24-26(2010)
Gutierrez, S.J., et al. Acta Odontol Latinoam 23(1):13-19(2010)
Zhao, J., et al. BMC Med. Genet. 11, 96 (2010) :

Images



Anti-NOG Antibody (Center) at 1:1000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 26 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



NOG Antibody (Center) (Cat. #AP18131c) western blot analysis in mouse liver tissue lysates (35ug/lane).This demonstrates the NOG antibody detected the NOG protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.