

**NOG Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP18131c****Specification**

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**NOG Antibody (Center) Blocking Peptide - Product Information**Primary Accession [Q13253](#)**NOG Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 9241**Other Names**  
Noggin, NOG**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**NOG Antibody (Center) Blocking Peptide - 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](http://www.uniprot.org/citations/21976273), PubMed: [26643732](http://www.uniprot.org/citations/26643732)).

**Cellular Location**

Secreted.

**NOG Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**NOG Antibody (Center) Blocking Peptide - Images**

## **NOG Antibody (Center) Blocking Peptide - 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 synostosis 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.

## **NOG Antibody (Center) Blocking Peptide - 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) :