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GDF5 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP2067a

Specification

GDF5 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession	P43026
Other Accession	NP_000548

GDF5 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 8200

Other Names
Growth/differentiation factor 5, GDF-5, Bone morphogenetic protein 14, BMP-14, Cartilage-derived morphogenetic protein 1, CDMP-1, Lipopolysaccharide-associated protein 4, LAP-4, LPS-associated protein 4, Radotermin, GDF5, BMP14, CDMP1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2067a was selected from the N-term region of human GDF5 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

GDF5 Antibody (N-term) Blocking Peptide - Protein Information

Name GDF5

Synonyms BMP14, CDMP1

Function
Growth factor involved in bone and cartilage formation. During cartilage development regulates differentiation of chondrogenic tissue through two pathways. Firstly, positively regulates differentiation of chondrogenic tissue through its binding of high affinity with BMPR1B and of less affinity with BMPR1A, leading to induction of SMAD1-SMAD5-SMAD8 complex phosphorylation and then SMAD protein signaling transduction (PubMed:24098149, PubMed:21976273, PubMed:<a

href="http://www.uniprot.org/citations/15530414" target="_blank">15530414, PubMed:25092592). Secondly, negatively regulates chondrogenic differentiation through its interaction with NOG (PubMed:21976273). Required to prevent excessive muscle loss upon denervation. This function requires SMAD4 and is mediated by phosphorylated SMAD1/5/8 (By similarity). Binds bacterial lipopolysaccharide (LPS) and mediates LPS-induced inflammatory response, including TNF secretion by monocytes (PubMed:11276205).

Cellular Location
Secreted. Cell membrane

Tissue Location
Predominantly expressed in long bones during embryonic development. Expressed in monocytes (at protein level)

GDF5 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

GDF5 Antibody (N-term) Blocking Peptide - Images

GDF5 Antibody (N-term) Blocking Peptide - Background

GDF5 is a member of the bone morphogenetic protein (BMP) family and the TGF-beta superfamily. This group of proteins is characterized by a polybasic proteolytic processing site which is cleaved to produce a mature protein containing seven conserved cysteine residues. The members of this family are regulators of cell growth and differentiation in both embryonic and adult tissues. Mutations in this gene are associated with acromesomelic dysplasia, Hunter-Thompson type; brachydactyly, type C; and chondrodysplasia, Grebe type. These associations confirm that the gene product plays a role in skeletal development.

GDF5 Antibody (N-term) Blocking Peptide - References

Kusafuka, K., et al., Virchows Arch. 442(5):482-490 (2003).Faiyaz-Ul-Haque, M., et al., Am. J. Med. Genet. 111(1):31-37 (2002).Everman, D.B., et al., Am. J. Med. Genet. 112(3):291-296 (2002).Faiyaz-Ul-Haque, M., et al., Clin. Genet. 61(6):454-458 (2002).Ducy, P., et al., Kidney Int. 57(6):2207-2214 (2000).