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GREMLIN Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6133a

Product Information

Application	IHC-P, WB, E
Primary Accession	O70326
Other Accession	O35793, O60565
Reactivity	Human, Rat, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	20710
Antigen Region	147-175

Additional Information

Gene ID	23892
Other Names	Gremlin-1, Cysteine knot superfamily 1, BMP antagonist 1, Down-regulated in Mos-transformed cells protein, Grem1, Cktsf1b1, Drm
Target/Specificity	This GREMLIN antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 147-175 amino acids from the C-terminal region of mouse GREMLIN.
Dilution	IHC-P~~1:100~500 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	GREMLIN Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Grem1
Synonyms	Cktsf1b1, Drm
Function	Cytokine that may play an important role during carcinogenesis and

	metanephric kidney organogenesis, as BMP a antagonist required for early limb outgrowth and patterning in maintaining the FGF4-SHH feedback loop (PubMed:12808456, PubMed:15201225). Down-regulates the BMP4 signaling in a dose-dependent manner (PubMed:15133038). Antagonist of BMP2; inhibits BMP2-mediated differentiation of osteoblasts (in vitro) (By similarity). Acts as inhibitor of monocyte chemotaxis (By similarity).
Cellular Location	Secreted.
Tissue Location	Highly expressed in spleen and to a lesser extent in lung, skeletal muscle and kidney. Expressed only in non-transformed cells or primary fibroblasts in culture but not in established transformed or tumor derived cell lines. Broadly expressed in limb bud mesenchyme but restricted to the distal limb bud mesenchyme and concentrated posteriorly. Expressed in ovary especially in granulosa cells of follicles of type 4.

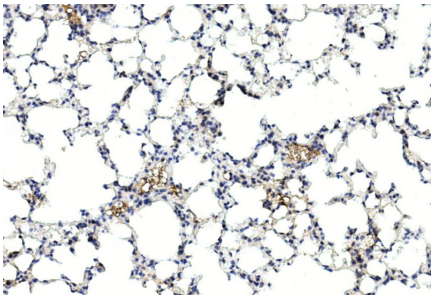
Background

GREMLIN is a member of the BMP (bone morphogenic protein) antagonist family. Like BMPs, BMP antagonists contain cystine knots and typically form homo- and heterodimers. The CAN (cerberus and dan) subfamily of BMP antagonists, to which this gene belongs, is characterized by a C-terminal cystine knot with an eight-membered ring. The antagonistic effect of the secreted glycosylated protein encoded by this gene is likely due to its direct binding to BMP proteins. As an antagonist of BMP, this gene may play a role in regulating organogenesis, body patterning, and tissue differentiation. In mouse, this protein has been shown to relay the sonic hedgehog (SHH) signal from the polarizing region to the apical ectodermal ridge during limb bud outgrowth.

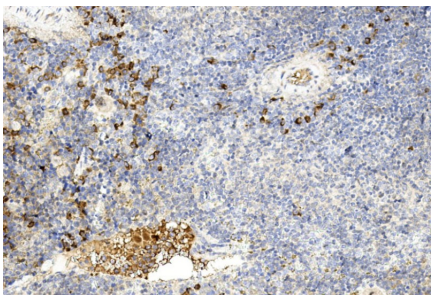
References

Chen, B., et al., J. Immunol. 173(10):5914-5917 (2004). Chen, B., et al., Biochem. Biophys. Res. Commun. 295(5):1135-1141 (2002). McMahon, R., et al., J. Biol. Chem. 275(14):9901-9904 (2000). Murphy, M., et al., J. Biol. Chem. 274(9):5830-5834 (1999). Hsu, D.R., et al., Mol. Cell 1(5):673-683 (1998).

Images

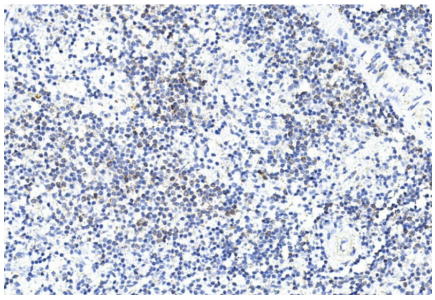


Immunohistochemical analysis of paraffin-embedded mouse lung section using GREMLIN Antibody (C-term) (Cat#AP6133a). AP6133a was diluted at 1:200 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

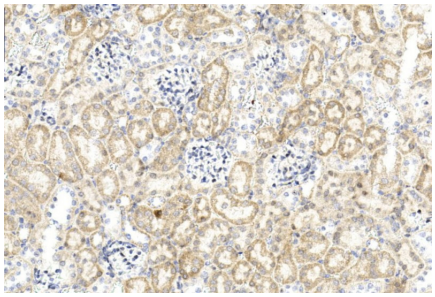


Immunohistochemical analysis of paraffin-embedded mouse spleen section using GREMLIN Antibody (C-term) (Cat#AP6133a). AP6133a was diluted at 1:200 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

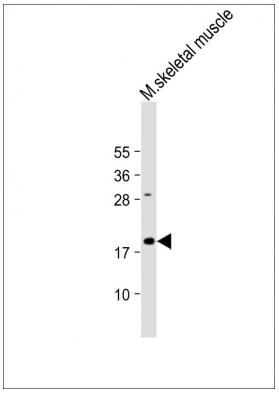
Immunohistochemical analysis of paraffin-embedded



human spleen section using GREMLIN Antibody (C-term) (Cat#AP6133a). AP6133a was diluted at 1:200 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded mouse kidney section using GREMLIN Antibody (C-term) (Cat#AP6133a). AP6133a was diluted at 1:200 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Anti-GREMLIN Antibody (C-term) at 1:2000 dilution + Mouse skeletal muscle lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 21 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Expression of gremlin, a bone morphogenetic protein antagonist, in human diabetic nephropathy.
- Expression of gremlin, a bone morphogenetic protein antagonist,is associated with vascular calcification in uraemia.
- Expression of gremlin, a bone morphogenetic protein antagonist, in glomerular crescents of pauci-immune glomerulonephritis.
- Effects of TGF-beta2, BMP-4, and gremlin in the trabecular meshwork: implications for glaucoma.
- Regulation of myogenic progenitor proliferation in human fetal skeletal muscle by BMP4 and its antagonist Gremlin.
- Molecular differentiation between osteophytic and articular cartilage--clues for a transient and permanent chondrocyte phenotype.
- Gremlin: a novel mediator of epithelial mesenchymal transition and fibrosis in chronic allograft nephropathy.
- Identification of target genes of PAX3-FOXO1 in alveolar rhabdomyosarcoma.
- Tubular overexpression of gremlin induces renal damage susceptibility in mice.
- Gremlin is a key pro-fibrogenic factor in chronic pancreatitis.
- Gremlin activates the Notch pathway linked to renal inflammation.

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