

Anti-Gremlin 1 Picoband Antibody
Catalog # ABO12312**Specification**

Anti-Gremlin 1 Picoband Antibody - Product Information

Application	WB
Primary Accession	O60565
Host	Rabbit
Reactivity	Human, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Gremlin-1(GREM1) detection. Tested with WB in Human;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-Gremlin 1 Picoband Antibody - Additional Information

Gene ID 26585

Other Names

Gremlin-1, Cell proliferation-inducing gene 2 protein, Cysteine knot superfamily 1, BMP antagonist 1, DAN domain family member 2, Down-regulated in Mos-transformed cells protein, Increased in high glucose protein 2, IHG-2, GREM1, CKTSF1B1, DAND2, DRM

Calculated MW

20697 MW KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Rat, Human

Subcellular Localization

Secreted .

Tissue Specificity

Highly expressed in small intestine, fetal brain and colon. Expression is restricted to intestinal subepithelial myofibroblasts (ISEMFs) at the crypt base. In subjects with HGPS1, by contrast, GREM1 is expressed, not only in basal ISEMFs, but also at very high levels in epithelial cells (predominantly colonocytes), with expression extending most of the way up the sides of the crypt. Weakly expressed in brain, ovary, prostate, pancreas and skeletal muscle. In brain found in the region localized around the internal capsule in the large subcortical nuclei, including caudate, putamen, substantia nigra, thalamus and subthalamus. Predominantly expressed in normal cells including neurons, astrocytes and fibroblasts. .

Protein Name

Gremlin-1

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg NaN₃.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human Gremlin 1 (151-184aa TMMVTLNCPQLPPTKKKRVTRVKQCRCISIDLD), identical to the related mouse and rat sequences.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins

Storage

At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

Anti-Gremlin 1 Picoband Antibody - Protein Information

Name GREM1

Synonyms CKTSF1B1, DAND2, DRM

Function

Cytokine that may play an important role during carcinogenesis and metanephric kidney organogenesis, as a BMP antagonist required for early limb outgrowth and patterning in maintaining the FGF4-SHH feedback loop. Down-regulates the BMP4 signaling in a dose-dependent manner (By similarity). Antagonist of BMP2; inhibits BMP2-mediated differentiation of osteoblasts (in vitro) (PubMed: <http://www.uniprot.org/citations/27036124> target="_blank">27036124). Acts as inhibitor of monocyte chemotaxis. Can inhibit the growth or viability of normal cells but not transformed cells when is overexpressed (By similarity).

Cellular Location

Secreted.

Tissue Location

Highly expressed in small intestine, fetal brain and colon. Expression is restricted to intestinal subepithelial myofibroblasts (ISEMFs) at the crypt base. In subjects with HMPD1, by contrast, GREM1 is expressed, not only in basal ISEMFs, but also at very high levels in epithelial cells (predominantly colonocytes), with expression extending most of the way up the sides of the crypt. Weakly expressed in brain, ovary, prostate, pancreas and skeletal muscle. In brain found in the region localized around the internal capsule in the large subcortical nuclei, including caudate, putamen, substantia nigra, thalamus and subthalamus. Predominantly expressed in normal cells including neurons, astrocytes and fibroblasts

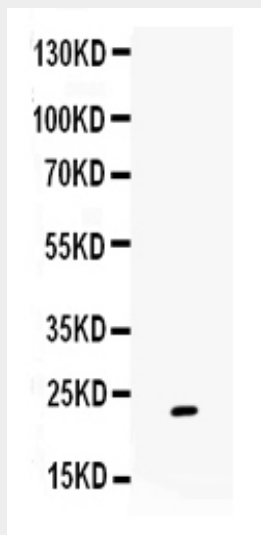
Anti-Gremlin 1 Picoband Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)

- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Gremlin 1 Picoband Antibody - Images



Anti- Gremlin 1 Picoband antibody, ABO12312, Western blotting All lanes: Anti Gremlin 1 (ABO12312) at 0.5ug/ml WB: Rat Pancreas Tissue Lysate at 50ug Predicted bind size: 23KD Observed bind size: 23KD

Anti-Gremlin 1 Picoband Antibody - Background

Gremlin, also known as Dm, is a highly conserved 20.7-kDa, 184 amino acid glycoprotein part of the DAN family and is a cysteine knot-secreted protein. Skeletal cells synthesize bone morphogenetic proteins (BMPs) and BMP antagonists. And Gremlin is expressed in osteoblasts and opposes BMP effects on osteoblastic differentiation and function in vitro. Gremlin 1 (GREM 1) is known for its antagonistic reaction with BMPs in the TGF beta signaling pathway. This gene inhibits BMP-2, BMP-4, and BMP-7. Inhibition by grem 1 of BMPs in mice allow the expression of fibroblast growth factors (FGFs) 4 and 8 and Sonic hedgehog (SHH) which are necessary for proper limb development. Gremlin 1 may play an oncogenic role especially in carcinomas of the uterine cervix, lung, ovary, kidney, breast, colon, pancreas, and sarcoma. Over-expressed gremlin 1 functions by interaction with YWHAH (Its binding site for gremlin 1 was located between residues 61-80 and gremlin 1 binding site for YWHAH was found to be located between residues 1-67). Therefore, Gremlin 1 and its binding protein YWHAH could be good targets for developing diagnostic and therapeutic strategies against human cancers.