



Anti-human Gremlin-1



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	102-PA46
Size:	200 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant human Gremlin-1 (Lys25-Asp1848) derived from E. coli.

Target Background

Synonyms:	Cell proliferation-inducing gene 2 protein
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Gremlin, also known as “Increased in High Glucose protein 2” (IHG2) and “Down regulated in Mos-transformed cells protein” (Drm), is a 28 kDa member of the Dan family of secreted glycoproteins. Native human Gremlin consist of 160 amino acids. The mature region contains one potential site for N-linked glycosylation (Asn42), a cysteine-rich region, and a cysteine-knot motif (aa94-184) whose structure is shared by members of the TGFβ superfamily. Human Gremlin exists in both secreted and membrane-associated forms and there exist 2 isoforms. Gremlin functions as a bone morphogenetic protein (BMP) antagonist. It acts by binding to, and forming heterodimers with, BMP2, BMP4, and BMP7, thus preventing them from interacting with their cell surface receptors. This mechanism is thought to be responsible for the pattern-inducing activity of Gremlin during embryonic development and to play a role in human diseases, such as diabetic nephropathy. However, intracellular BMP-independent mechanisms of action may mediate the ability of Gremlin to suppress transformation and tumor genesis under certain experimental conditions. Gremlin also interacts with Slit proteins and acts as an inhibitor of monocyte chemotaxis. In addition, Gremlin has been found to be a proangiogenic factor expressed by endothelium. Furthermore Gremlin is a novel agonist of the major proangiogenic receptor VEGFR2.

References

1. Hsu DR et al, Mol Cell 1 (1998)
2. McMahon R et al, JBC 275 (2000)
3. Wordinger RJ et al, Exp Eye Res (2008)
4. Topol LZ et al, Cytogenet Cell Genet (2000)
5. Khokha MK et al, Nat. Genet (2003)
6. Chen B et al, BBRC (2002)
7. Stabile H et al, Blood (2007)
8. Chen B et al, J Immunol (2004)
9. Mitola S et al, Blood (2010).

Database References Antigen

Protein RefSeq:	NP_001178252.1
Uniprot ID:	O60565
mRNA RefSeq:	NM_013372

Product Specifications

Species reactivity	human
Clone/Ab feature	Rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant human Gremlin-1 (RT #200-070)
Formulation	lyophilized
Buffer	PBS

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

Western Blot: Use 2-5 µg/ml

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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Handling/Applications

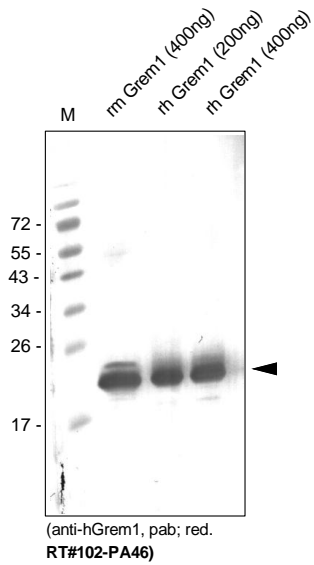


Figure 1: Western Analysis of anti-human Gremlin-1. Samples were loaded in 15% SDS-polyacrylamide gel under reducing conditions. Lane 1: MWM (kDa); lane 2: rm Gremln1; lane 3: rh Gremln1; lane 4: rh Gremln1.