



Anti-mouse Gremlin-1



FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	103-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 mouse Gremlin-1 (Lys25-Asp184) derived from E. coli.

Target Background

Synonyms:	Cell proliferation-inducing gene 2 protein
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Gremlin was identified in a *Xenopus* expression cloning screen as a dorsalizing factor that can induce a secondary axis. A rat homolog, called Drm, was identified as a cDNA that was down regulated in v Mos transfected cells. Gremlin/Drm belongs to the DAN family of secreted glycoproteins that are BMP antagonists. Other members of the family include: Cerberus, Dante, PRDC, Caronte and DAN. DAN family members share a cysteine-rich domain that is structurally related to the cysteine-knot motif found in TGFβ superfamily ligands. In vitro, Gremlin/Drm binds BMP4 and BMP2 indicating that it might interfere with BMP signaling. Gremlin/Drm acts as a BMP2/ 4 antagonist in a variety of tissues and developmental processes including: *Xenopus* animal cap explants, chick limb bud outgrowth and chondrogenesis, murine lung branching morphogenesis, and osteogenic differentiation of mouse myoblasts and bone marrow stromal cells. In addition, expression of Gremlin/Drm has been shown to be down-regulated in a wide range of human cancer cell lines. Mouse, human, chick and *Xenopus* homologs of Gremlin share over 80% amino acid identity. It is likely that various DAN family members and other BMP antagonists including Noggin, Chordin, Follistatin and TSG can selectively antagonize the activities of different subsets of TGFβ superfamily ligands.

References

1. Hsu DR et al, Mol Cell 1 (1998)
2. Merino R et al, Development 126 (1999)
3. Shi W et al, Am J Physiol 280 (2001)
4. Topol LZ et al, JBC 275 (2000).

Database References Antigen

Protein RefSeq:	NP_035954.1
Uniprot ID:	O70326
mRNA RefSeq:	NM_011824

Product Specifications

Species reactivity	mouse
Clone/Ab feature	Rabbit IgG
Cross reactivity	ND
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant mouse Gremlin-1 (RT #M30-025)
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

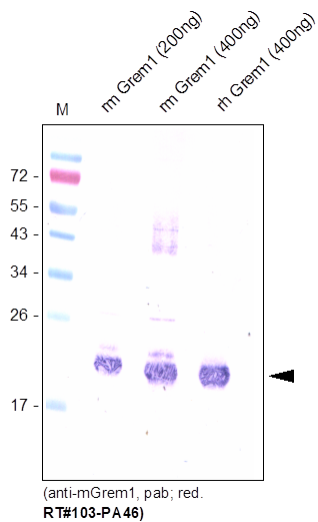


Figure 1: Western Analysis of anti-mouse Gremlin-1. Samples were loaded in 15% SDS-polyacrylamide gel under reducing conditions. Lane 1: MWM (kDa); lane 2: rm Gremlin1; lane 3: rh Gremlin1; lane 4: rh Gremlin1.