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Product datasheet for AP26029PU-N

Grem1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	**Western blot**: 2-5 µg/ml.
Reactivity:	Human, Mouse
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Highly pure (>95%) recombinant Mouse Grem1 (Lys25-Asp184) derived from E. coli *Cat.-No* AR26008PU-N
Specificity:	This antibody detects Gremlin-1 / GREM1.
Formulation:	PBS, pH 7.2 State: Purified State: Lyophilized purified Ig fraction
Reconstitution Method:	Restore in sterile water to a concentration of 0.1-1.0 mg/ml. Centrifuge vial prior to opening.
Purification:	Protein A Chromatography
Conjugation:	Unconjugated
Storage:	Store lyophilized at 2-8°C for 6 months or at -20°C long term. After reconstitution store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C long term. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	gremlin 1, DAN family BMP antagonist
Database Link:	Entrez Gene 26585 HumanEntrez Gene 23892 Mouse O70326

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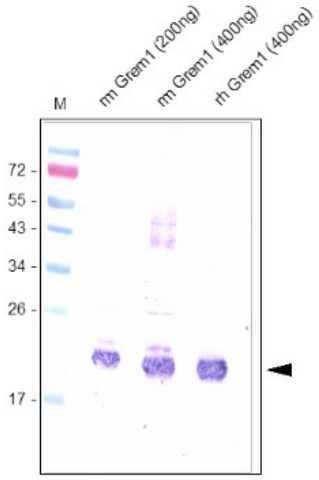
Background:

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. Posttranslational modifications include glycosylation and phosphorylation (1-3). Human Gremlin exists in both secreted and membrane-associated forms (3) and there exist 2 isoforms. The aa sequence identity of human Gremlin with mouse and chicken Gremlin is 99% and 86%, respectively. Northern blot analysis shows that Gremlin mRNA is highly expressed in the small intestine, fetal brain and colon, and weakly expressed in adult brain, ovary, prostate, pancreas and skeletal muscle (4). 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 (1). This mechanism is thought to be responsible for the pattern-inducing activity of Gremlin during embryonic development (5) and to play a role in human diseases, such as diabetic nephropathy (6). However, intracellular BMP-independent mechanisms of action (7) may mediate the ability of Gremlin to suppress transformation and tumor genesis under certain experimental conditions (8, 9). Gremlin also interacts with Slit proteins and acts as an inhibitor of monocyte chemotaxis (10). In addition, Gremlin has been found to be a proangiogenic factor expressed by endothelium (9). Furthermore Gremlin is a novel agonist of the major proangiogenic receptor VEGFR2 (11).

Synonyms:

DAND2, CKTSF1B1, DRM, PIG2, IHG-2, GREM-1

Product images:



Western analysis using anti-Mouse Gremlin-1 antibody. Samples were loaded in 15% SDS-polyacrylamide gel under reducing conditions. Lane 1: MWM (kDa) Lane 2: rm Grem1, Lane 3: rm Grem1, Lane 4: rh Grem1.