



Anti-Mouse Gremlin (#30C14)

20230310DS

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

Cat.-no.:	103-M532
Size:	100 µg
Lot. No.:	According to product label

Preparation: This antibody was produced from a hybridoma (mouse myeloma fused with spleen cells from a rat immunized with mouse recombinant protein Gremlin).

Target Background

Synonyms (Target):	Grem1; ld; Drm; Cktsf1b1
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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. Posttranslational modifications include glycosylation and phosphorylation. Human Gremlin exists in both secreted and membrane-associated forms 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. 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.

Database References Target

Protein RefSeq:	NP_035954.1
Uniprot ID:	O70326
mRNA RefSeq:	NM_011824.4

Product Specifications

Host	Rat
Reactivity against	Mouse
Clonality	Monoclonal Antibody
Clone	(#30C14)
Isotype	IgG2
Purification	Protein G chromatography
Antigen	Mouse recombinant protein Gremlin
Formulation	lyophilized
Reconstitution buffer	PBS

Application/Handling

Reconstitution: Centrifuge vial prior to opening. Reconstitute the antibody with 500 µl sterile PBS and the final concentration is 200 µg/ml.

Stability: Lyophilized samples are stable for 2 years from date of receipt when stored at -70°C. Reconstituted antibody can be aliquoted and stored frozen at < -20°C for at least six months without detectable loss of activity.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Applications

The antibody can be used within the following applications:

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