

Gremlin-1 Recombinant Protein | GREM1 recombinant protein

Human Gremlin-1

CATALOG # AAA79162	HOST E Coli	REACTIVITY Human
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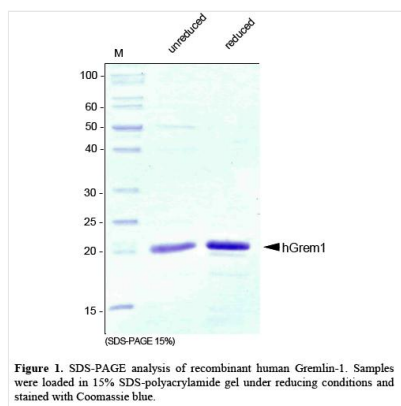
PRODUCT SYNONYMS

Gremlin-1; Human Gremlin-1; Recombinant Human Gremlin-1; Cell proliferation-inducing gene 2 protein; BMP antagonist 1; GREM1 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli
Reactivity	Human
Purity/Purification	> 95% by SDS-PAGE & silver stain
Form/Format	Lyophilized
Sequence	MKKKGSQGAI PPPDKAQHND SEQTQSPQQP GSRNRGRGQG RGTAMPGEEV LESSQEALHV TERKYLKRDW CKTQPLKQTI HEEGCNSRTI INRFCYGQCN SFYIPRHIRK EEGSFQSCSF CKPKKFTTMM VTLNCPQLQP PTKKKRVRTV KQCRCISIDL D
Sequence Length	161
N Terminal Sequence	MKKKGSQGAI
Buffer	50 mM acetic acid
Reconstitution	Human Gremlin-1 should be reconstituted in 50 mM acetic acid or water to a concentration of 0.1 mg/mL. This solution can be diluted in water or other buffer solutions or stored at -20°C.
Preparation and Storage	The lyophilized human Gremlin-1, though stable at room temperature, is best stored desiccated below 0 degree C. Avoid repeated freeze-thaw cycles.

IMAGES



Application Data

ADDITIONAL INFORMATION

Related Product Information for GREM1 recombinant protein	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 TGFbeta superfamily. Posttranslational modifications include glycosylation and phosphorylation (1-3). 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.
Product Categories/Family for GREM1 recombinant protein	Cytokines & Growth Factors
References	Mitola S et al, Blood (2010); Wordinger RJ et al, Exp Eye Res (2008); Stabile H et al, Blood (2007); Chen B et al, J Immunol (2004); Khokha MK et al, Nat. Genet (2003)

NCBI AND UNIPROT INFORMATION

NCBI GI #	300797328
NCBI GeneID	26585
NCBI Accession #	NP_037504.1
NCBI GenBank Nucleotide #	NM_013372.6
UniProt Accession #	O60565 ; Q52LV3 ; Q8N914 ; Q8N936
Molecular Weight	18.4 kDa
NCBI Official Full Name	gremlin-1 isoform 2
NCBI Official Synonym Full Names	gremlin 1, DAN family BMP antagonist
NCBI Official Symbol	GREM1
NCBI Official Synonym Symbols	DRM; HMPS; PIG2; CRAC1; DAND2; IHG-2; GREMLIN; CKTSF1B1
NCBI Protein Information	gremlin-1; gremlin 1-like protein; DAN domain family member 2; increased in high glucose-2; colorectal adenoma and carcinoma 1; cell proliferation-inducing gene 2 protein; cysteine knot superfamily 1, BMP antagonist 1; gremlin 1, cysteine knot superfamily, homolog; down-regulated in Mos-transformed cells protein
UniProt Protein Name	Gremlin-1
UniProt Gene Name	GREM1
UniProt Synonym Gene Names	CKTSF1B1; DAND2; DRM; IHG-2
UniProt Entry Name	GREM1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.