GREM1
Recombinant Human Gremlin-1

Catalog No.	CS413	**Quantity:**	50 µg

Alternate Names: Cell proliferation-inducing gene 2 protein, Cysteine knot superfamily 1, DAN domain family member 2, Increased in high glucose protein 2, IHG-2

Description: Gremlin, also known as “Increased in High Glucose protein 2” and “Down regulated in Mos-transformed cells protein” (Drm), is a 28 kDa member of the Dan family of secreted glycoproteins. Native human Gremlin c. The mature region contains one potential site for N-linked glycosylation (Asn42), a cysteine-rich region, and a cysteine-knot motif (aa 94-184) 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/-4 -7, 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.

UniProt ID: O60565

Gene ID: 26585

Source: *E.coli*

Molecular Weight: 18.4 kDa (161 aa)

Formulation: Lyophilized from 50 mM acetic acid

Purity: > 95% by SDS-PAGE, visualized by silver stain

Amino Acid Sequence: MKKKGSQGAI PPPDKAQHND SEQTQSPQQP GSRNRGRGQG RGTAMPGEEV LESSQEALHV TERKYLKRDW CKTQPLKQTI HEEGCNSRTI INRFCYGQCN SFYIPRHIRK EEGSFQSCSF CKPKKFTMMV TLNCPELQPP TKKKRVTRVK QCRCISIDLD

Cell Sciences®
65 Parker Street
Unit 11
Newburyport, MA 01950

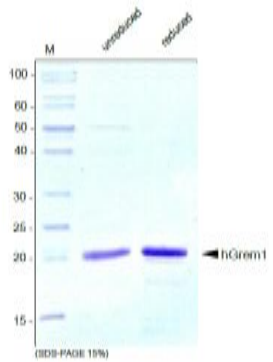
Toll Free: 888-769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Website: www.cellsciences.com

Reconstitution: **Centrifuge vial prior to opening.** Add sterile water to the vial to a concentration of 0.1 - 1.0 mg/mL. **Do not vortex.** After complete solubilization of the protein, it may be further diluted with other solutions containing a carrier protein such as 0.1 % BSA.

Storage & Stability: The lyophilized protein is stable at -20°C to -80° for up to 1 year. Reconstituted working aliquots are stable for 1 week at 2-8°C and for 3 months at -20°C to -80°C. **Avoid repeated freeze/thaw cycles.**

SDS-PAGE analysis of recombinant human Gremlin-1. Samples were loaded in 15% SDS-polyacrylamide gel under reducing conditions and stained with Coomassie blue.



NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

Cell Sciences®
65 Parker Street
Unit 11
Newburyport, MA 01950

Toll Free: 888-769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Website: www.cellsciences.com