Grem1
Recombinant Mouse Gremlin-1

Catalog No.	CS417	**Quantity:**	50 µg

Alternate Names: Cell proliferation-inducing gene 2 protein, Cysteine knot superfamily 1 BMP antagonist 1, Down-regulated in Mos-transformed cells protein

Description: 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.

UniProt ID: O70326

Gene ID: 23892

Source: *E. coli*

Molecular Weight: 20.7 kDa (161 aa)

Formulation: Lyophilized from 50 mM acetic acid

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

Amino Acid Sequence: MKKKGSQGAI PPPDKAQHND SEQTQSPPQP GSRTRGRGQG RGTAMPGEEV LESSQEALHV TERKYLKRDW CKTQPLKQTI HEEGCNSRTI INRFCYGQCN SFYIPRHIRK EEGSFQSCSF CKPKKFTTMM VTLNCPELQP PTKKKRVTRV KQCRCISIDL D

Reconstitution: **Centrifuge vial prior to opening.** Add 50 mM acetic acid 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.

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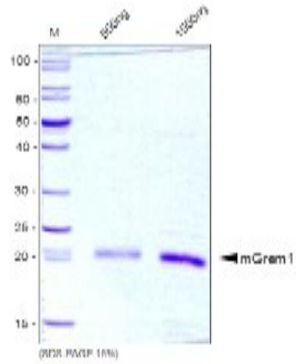
Storage & Stability: The lyophilized protein is stable at -20°C to -80° for up to 1 year. Reconstituted working aliquots are stable for 1 week at 2-8°C and for 3 months at -20°C to -80°C.
Avoid repeated freeze/thaw cycles.

SDS-PAGE analysis of recombinant mouse Gremlin-1.
Samples were loaded in 15% SDS-polyacrylamide gel and stained with Coomassie blue.
Lane 1: Molecular weight markers (kDa).
Lane 2: 500ng Gremlin-1.
Lane 3: 1000ng Gremlin-1.



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