



Recombinant Protein Technical Manual
Recombinant Mouse Gremlin 1/GREM1 Protein (His
Tag)(Active)
RPES4186

Product Data:

Product SKU: RPES4186

Size: 50µg

Species: Mouse

Expression host: Baculovirus-Insect Cells

Uniprot: O70326

Protein Information:

Molecular Mass: 19.7 kDa

AP Molecular Mass: 25 kDa

Tag: C-His

Bio-activity: Measured by its ability to inhibit recombinant human BMP4-induced alkaline phosphatase production by MC3T3-E1 cells. The ED50 for this effect is typically 1-7 µg/mL in the presence of 50 ng/mL of recombinant human BMP4.

Purity: > 97 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU per µg of the protein as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile 20mM Tris, 500mM NaCl, pH 7.4, 10% gly, 0.5mM EDTA, 3mM DTT

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: Cktsf1b1;Drm;Grem;ld

Immunogen Information:

Sequence: Met1-Asp184

Background:

GREM1 belongs to the DAN family. It contains 1 CTCK (C-terminal cystine knot-like) domain. GREM1 is a cysteine knot-secreted protein and acts as an inhibitor in the TGF beta signaling pathway. It inhibits BMP-2, -4, and -7. Inhibition by grem 1 of BMPs in mice allow the expression of fibroblast growth factors (FGFs) 4 and 8 and Sonic hedgehog (SHH) which are necessary for proper limb development. It interacts with SLIT1 and SLIT2 in a glycosylation-dependent manner. As a cytokine, GREM1 may play an important role during carcinogenesis and metanephric kidney organogenesis, as a BMP antagonist required for early limb outgrowth and patterning in maintaining the FGF4-SHH feedback loop. It down-regulates the BMP4 signaling in a dose-dependent manner. It also acts as inhibitor of monocyte chemotaxis. GREM1 is highly expressed in small intestine, fetal brain and colon.