

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



Catalog Number:PKSM040914

Note: Centrifuge before opening to ensure complete recovery of vial contents.

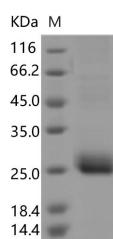
Description

Synonyms	Cktsf1b1;Drm;Grem;ld
Species	Mouse
Expression Host	Baculovirus-Insect Cells
Sequence	Met1-Asp184
Accession	O70326
Calculated Molecular Weight	19.7 kDa
Observed molecular weight	25 kDa
Tag	C-His
Bioactivity	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.

Properties

Purity	> 88 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg as determined by the LAL method.
Storage	Generally, 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.

Data



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.

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GREM1 is highly expressed in small intestine, fetal brain and colon.

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