Recombinant Human GREM1 Protein(Trx Tag)

Catalog Number: PDEH101103

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

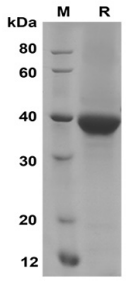
Description

Species	Human
Source	E.coli-derived Human GREM1 protein Met1-Asp184,with an N-terminal Trx
Calculated MW	40.1 kDa
Observed MW	40 kDa
Accession	O60565
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Human GREM1 proteins, 2μg/lane of Recombinant Human GREM1 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 40 kDa

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 allows 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 an inhibitor of monocyte chemotaxis. GREM1 is highly expressed in the small intestine, fetal brain, and colon.