abcam

Product datasheet

Recombinant human Gremlin 1 protein ab139770

Description

Product name	Recombinant human Gremlin 1 protein
Biological activity	Determined by its ability to inhibit BMP-4 induced alkaline phosphatase production by ATDC-5 chondrogenic cells. The ED_{50} for this effect is 0.07-0.11 µg/ml.
Purity	> 90 % SDS-PAGE. The purity of ab139770 is greater than 90% by SDS-PAGE gel and HPLC analyses.
Expression system	CHO cells
Accession	O60565
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	KKKGSQGAIP PPDKAQHNDS EQTQSPQQPG SRNRGRGQGR GTAMPGEEVL ESSQEALHVT ERKYLKRDWC KTQPLKQTIH EEGCNSRTII NRFCYGQCNS FYIPRHIRKE EGSFQSCSFC KPKKFTTMMV TLNCPELQPP TKKKRVTRVK QCRCISIDLD
Predicted molecular weight	18 kDa
Amino acids	25 to 184

Specifications

Our **Abpromise guarantee** covers the use of **ab139770** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies HPLC SDS-PAGE
Form	Lyophilized

Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. Constituents: 0.16% Sodium phosphate, 0.29% Sodium chloride This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Centrifuge vial prior to opening. Reconstitute in water to 0.1-1.0 mg/ml and store at 2°C to 8°C for up to 1 week. Do not vortex. Extended storage: Follow reconstitution with further dilution in a buffer containing a carrier protein (example 0.1% BSA) and store at -20°C to -80°C for up to 3 months.

General Info

Function	Cytokine that 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. Down-regulates the BMP4 signaling in a dose-dependent manner. Acts as inhibitor of monocyte chemotaxis.
Tissue specificity	Highly expressed in small intestine, fetal brain and colon. Expression is restricted to intestinal subepithelial myofibroblasts (ISEMFs) at the crypt base. In subjects with HMPS1, by contrast, GREM1 is expressed, not only in basal ISEMFs, but also at very high levels in epithelial cells (predominantly colonocytes), with expression extending most of the way up the sides of the crypt. Weakly expressed in brain, ovary, prostate, pancreas and skeletal muscle. In brain found in the region localized around the internal capsule in the large subcortical nuclei, including caudate, putamen, substantia nigra, thalamus and subthalamus. Predominantly expressed in normal cells including neurons, astrocytes and fibroblasts.
Involvement in disease	Polyposis syndrome, mixed hereditary 1
Sequence similarities	Belongs to the DAN family. Contains 1 CTCK (C-terminal cystine knot-like) domain.
Cellular localization	Secreted.

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