

Recombinant Human TSG6 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51024

Size: 10ug, 100ug

Protein Name: Tumor necrosis factor-inducible gene 6 protein (EC 3.1.1.-) (Hyaluronate-binding protein) (TNF-stimulated gene 6 protein) (TSG-6) (Tumor necrosis factor alpha-induced protein 6) (TNF alpha-induced protein 6)

Synonym: TNFAIP6, TSG6

UniProt ID: P98066

UniProt Link: www.uniprot.org/uniprotkb/P98066/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 277 AA

Molecular Weight: 31 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MIIILYLFLLWEDTQGWGFKDGFHNSIWLERAAGVYHREARSGKYKLTAEAKAVCEFEAGHLATY
KQLEAARKIGFHVCAAGWMAKGRVGYPIVKPGPNCGFGKTGIIDYGIRLNRSERWDAYCYNPHAKE
CGGVFTDPKQIFKSPGFNPNEYEDNQICYWHIRLKYGQRIHLSFLDFDLEDDPGCLADYVEIYDSYDDV
HGFVGRYCGDELPPDDIISTGNVMTLKFSLDASVTAGGFQIKYVAMDPVSKSSQGKNTSTTSTGNKNF
LAGRFSHL

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Tumor necrosis factor-inducible gene 6 protein (EC 3.1.1.-) (Hyaluronate-binding protein) (TNF-stimulated gene 6 protein) (TSG-6) (Tumor necrosis factor alpha-induced protein 6) (TNF alpha-induced protein 6) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Major regulator of extracellular matrix organization during tissue remodeling (PubMed:15917224, PubMed:18042364, PubMed:26823460). Catalyzes the transfer of a heavy chain (HC) from inter-alpha-inhibitor (I-alpha-I) complex to hyaluronan. Cleaves the ester bond between the C-terminus of the HC and GalNAc residue of the chondroitin sulfate chain in I-alpha-I complex followed by transesterification of the HC to hyaluronan. In the process, potentiates the antiprotease function of I-alpha-I complex through release of free bikunin (PubMed:15917224, PubMed:16873769, PubMed:20463016). Acts as a catalyst in the formation of hyaluronan-HC oligomers and hyaluronan-rich matrix surrounding the cumulus cell-oocyte complex, a necessary step for oocyte fertilization (PubMed:26468290). Assembles hyaluronan in pericellular matrices that serve as platforms for receptor clustering and signaling. Enables binding of hyaluronan deposited on the surface of macrophages to LYVE1 on lymphatic endothelium and facilitates macrophage extravasation. Alters hyaluronan binding to functionally latent CD44 on vascular endothelium, switching CD44 into an active state that supports leukocyte rolling (PubMed:15060082, PubMed:26823460). Modulates the interaction of chemokines with extracellular matrix components and proteoglycans on endothelial cell surface, likely preventing chemokine gradient formation (PubMed:27044744). In a negative feedback mechanism, may limit excessive neutrophil recruitment at inflammatory sites by antagonizing the association of CXCL8 with glycosaminoglycans on vascular endothelium (PubMed:24501198). Has a role in osteogenesis and bone remodeling. Inhibits BMP2-dependent differentiation of mesenchymal stem cell to osteoblasts (PubMed:16771708, PubMed:18586671). Protects against bone erosion during inflammation by inhibiting TNFSF11/RANKL-dependent osteoclast activation (PubMed:18586671).

Subcellular Localization: Secreted .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.