

Recombinant Human CHST4 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50182

Size: 10ug, 100ug

Protein Name: Carbohydrate sulfotransferase 4 (EC 2.8.2.-) (Galactose/N-acetylglucosamine/N-acetylglucosamine 6-O-sulfotransferase 3) (GST-3) (High endothelial cells N-acetylglucosamine 6-O-sulfotransferase) (HEC-GlcNAc6ST) (L-selectin ligand sulfotransferase) (LSST) (N-acetylglucosamine 6-O-sulfotransferase 2) (GlcNAc6ST-2) (Gn6st-2)

Synonym: CHST4

UniProt ID: Q8NCG5

UniProt Link: www.uniprot.org/uniprotkb/Q8NCG5/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 386 AA

Molecular Weight: 45 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MLLPKKMKLLLFLVSQMAILALFFHMYSHNISSLSMKAQPERMHVLVLSSWRSGSSFVGQLFGQHDPD
VFYLMPEPAWHVWMTFKQSTAWMLHMAVRDLIRAVFLCDMSVFDAYMEPGPRRQSSSLFQWENSRA
LCSAPACDIIPQDEIIPRAHCRLLCSQQPFVVEKACRSYSHVVLKEVRFFNLQSLYPLLKDPSLNLHI
VHLVRDPRAVFRSRERTKGDLMIDSRIVMGQHEQKLKKEDQPYYVMQVICQSQLEIYKTIQSLPKAL
QERYLLVRYEDLARAPVAQTSRMYEFGLEFLPHLQTWVHNITRGKGMGDHAFHTNARDALNVSQ
AWRWSLPYEKVSRLQKACGDAMNLLGYRHVRSESEQRNLLLDLLSTWTVPEQIH

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 Carbohydrate sulfotransferase 4 (EC 2.8.2.-) (Galactose/N-acetylglucosamine/N-acetylglucosamine 6-O-sulfotransferase 3) (GST-3) (High endothelial cells N-acetylglucosamine 6-O-sulfotransferase) (HEC-GlcNAc6ST) (L-selectin ligand sulfotransferase) (LSST) (N-acetylglucosamine 6-O-sulfotransferase 2) (GlcNAc6ST-2) (Gn6st-2) 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: Sulfotransferase involved in SELL/L-selectin ligand biosynthesis pathway. Catalyzes the transfer of the sulfate group from 3'-phospho-5'-adenylyl sulfate (PAPS) onto the hydroxyl group at C-6 position of the non-reducing N-acetylglucosamine (GlcNAc) residue within O-linked mucin-type glycans. Contributes to generate sialyl 6-sulfo Lewis X determinant (also known as MECA-79 epitope) for SELL recognition, a prerequisite for continuous lymphocyte homing into peripheral lymph nodes and antigen immune surveillance (PubMed:10330415, PubMed:11439191, PubMed:11726653, PubMed:12107080). Transfers the sulfate group primarily on core 2 GlcNAcbeta1-6(Galbeta1-3)GalNAcalphaSer/Thr and extended core 1 GlcNAcbeta1-3Galbeta1-3GalNAcalphaSer/Thr based O-linked glycans on CD34 and GLYCAM1 peripheral node addressins (PNAds) expressed on the luminal side of high endothelial venules (HEVs) (PubMed:11439191). The recognition of PNAds by SELL initiates a multistep process comprising tethering and rolling of blood lymphocytes on HEVs against the blood flow, followed by chemokine signaling, integrin-mediated lymphocyte adhesion onto endothelial cells and lymphocyte transendothelial migration. Modulates rolling velocity and differential T and B lymphocyte recruitment into peripheral lymph nodes, with a major role in B lymphocyte homing. Might be redundant in sulfation of MADCAM1 and lymphocyte trafficking to mesenteric lymph nodes (By similarity). Can also sulfonate core 3 GlcNAcbeta1-3GalNAc-R based glycans as well as GlcNAcbeta1-3Galbeta1-Glc, GlcNAcbeta1-6ManOMe and GlcNAcbeta1-2Man oligosaccharides, which might be ectopically expressed during tumorigenesis (PubMed:11439191, PubMed:11726653, PubMed:12107080).

Subcellular Localization: Golgi apparatus membrane ; Single-pass type II membrane protein .

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.