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CHST4 Blocking Peptide (C-term)

Synthetic peptide
Catalog # BP21310b

Specification

CHST4 Blocking Peptide (C-term) - Product Information

Primary Accession Q8NCG5

CHST4 Blocking Peptide (C-term) - Additional Information

Gene ID 10164

Other Names
Carbohydrate sulfotransferase 4, 282-, 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, CHST4

Target/Specificity
The synthetic peptide sequence is selected from aa 357-370 of HUMAN CHST4

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CHST4 Blocking Peptide (C-term) - Protein Information

Name CHST4

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:11439191, PubMed:12107080, PubMed:10330415, PubMed:11726653). 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 lumenal 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:12107080, PubMed:11439191, PubMed:11726653).

Cellular Location
Golgi apparatus membrane; Single-pass type II membrane protein

Tissue Location
Specifically expressed in HEV. Weakly expressed in spleen. Not expressed in other tissues. Expressed in colonic mucinous adenocarcinoma.

CHST4 Blocking Peptide (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CHST4 Blocking Peptide (C-term) - Images

CHST4 Blocking Peptide (C-term) - Background

Sulfotransferase that utilizes 3'-phospho-5'-adenylyl sulfate (PAPS) as sulfonate donor to catalyze the transfer of sulfate to position 6 of non-reducing N-acetylglucosamine (GlcNAc) residues within mucin-associated glycans that ultimately serve as SELL ligands. SELL ligands are present in high endothelial cells (HEVs) and play a central role in lymphocyte homing at sites of inflammation. Participates in biosynthesis of the SELL ligand sialyl 6-sulfo Lewis X on receptors SPN/CD43, GLYCAM1 and MADCAM1. Also involved in biosynthesis of SELL ligand recognized by MECA-79 antibody. Plays a central role in lymphocyte trafficking during chronic inflammation. Has a catalytic preference for core 2- branched mucin-type O-glycans. Can use GlcNAcbeta1-6[Galbeta1-3]GalNAc-pNP (core 2), GlcNAcbeta1-6ManOMe and GlcNAcbeta1-2Man oligosaccharide structures as acceptors. Has also activity toward core 3 of GlcNAcbeta1-3GalNAc-pNP. Its substrate specificity may be influenced by its subcellular location.

CHST4 Blocking Peptide (C-term) - References

Bistrup A.,et al.J. Cell Biol. 145:899-910(1999).
Yeh J.-C.,et al.Cell 105:957-969(2001).
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