

Recombinant Human CHST2 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50181

Size: 10ug, 100ug

Protein Name: Carbohydrate sulfotransferase 2 (EC 2.8.2.-) (Galactose/N-acetylglucosamine/N-acetylglucosamine 6-O-sulfotransferase 2) (GST-2) (N-acetylglucosamine 6-O-sulfotransferase 1) (GlcNAc6ST-1) (Gn6ST-1)

Synonym: CHST2, GN6ST

UniProt ID: Q9Y4C5

UniProt Link: www.uniprot.org/uniprotkb/Q9Y4C5/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 530 AA

Molecular Weight: 58 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSRSPQRALPPGALPRLLQAAPAAAPRALLPQWPRRPGRWPASPLGMKVFRRKALVLCAGYALL
LVLTMLNLLDYKWHKEPLQQCNPDGPLGAAAGAAGGSWGRPGPPPAGPPRAHARLDLRTPYRPPA
AAVGAAPAAAAGMAGVAAPPNGTRGTGGVGDQRQLVYVFTTWRSRSSFFGELFNQNPVEVFFLYE
PVWHVWQKLYPGDAVSLQGAARDMLSALYRCDLSVFQLYSPAGSGGRNLTTLGIFGAATNKVVCS
SPLCPAYRKEVVGLVDDRVCCKCPPQRLARFEEECRKYRTLVIKGVRFVDVAVLAPLLRDPALDLKVI
HLVRDPRAVASSRIRSRHGLIRESLQVVRSDPRAHRMPFLEAAGHKLGAKEGVGGPADYHALGA
MEVICNSMAKTLQ TALQPPDWLQGHYLVVRYEDLVGDPVKTLRRVYDFVGLLVSPMEQFALNMTS
GSGSSSKPFVVSARNATQAANAWRTALT FQ QIKQVEEFCYQPM AVLGYERVNSPEEVKDLSKTLLR
KPRL

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 2 (EC 2.8.2.-) (Galactose/N-acetylglucosamine/N-acetylglucosamine 6-O-sulfotransferase 2) (GST-2) (N-acetylglucosamine 6-O-sulfotransferase 1) (GlcNAc6ST-1) (Gn6ST-1) 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 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 keratan-like structures on N- and O-linked glycans and within O-linked mucin-type glycans (PubMed:11042394, PubMed:11726653, PubMed:35939855, PubMed:38034954, PubMed:9722682). Selectively transfers the sulfate group onto the terminal GlcNAc of alpha1,3-Man or alpha1,6-Man antenna of complex-type N-glycans depending on glycan composition. Only sulfates terminal GlcNAc of alpha1,3-Man antenna of G0 complex-type N-glycans. Can sulfate keratan-type N-acetylglucosamine (GlcNAc) repeats generating epitopes for self versus non-self immune recognition by C-type lectins (PubMed:35939855, PubMed:38034954). Transfers the sulfate group primarily on core 2 GlcNAcbeta1-6(Galbeta1-3)GalNAcalpha-Ser/Thr and with lower efficiency on extended core 1 GlcNAcbeta1-3Galbeta1-3GalNAcalpha-Ser/Thr based O-linked glycans on peripheral node addressins (PNAs) expressed on the luminal side of high endothelial venules (HEVs). Shares substrate specificity with CHST4 and both contribute 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 (By similarity) (PubMed:9722682). Has no activity toward alpha-linked GlcNAc moiety exposed at the non-reducing ends or to internally located GlcNAc residues (PubMed:11042394).

Subcellular Localization: Golgi apparatus, trans-Golgi network 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.