

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carbohydrate Sulfotransferase 4/CHST4 in Western blots. In Western blots, approximately 25% cross-reactivity with recombinant mouse (rm) CHST4 is observed and less than 5% cross-reactivity with recombinant human (rh) CHST1, rhCHST5, and rhCHST6 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Carbohydrate Sulfotransferase 4/CHST4 aa 23-286
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Carbohydrate Sulfotransferase 4/CHST4 (Catalog # 5357-ST)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The CHST family is comprised of 14 enzymes in human. All members of this family are Golgi-localized type II membrane proteins (1). Only the luminal and enzymatic domain is expressed in each of our recombinant CHST proteins. These enzymes transfer sulfate (i.e., sulfonate) onto the 6-O or 4-O positions of GalNAc, Gal and GlcNAc residues on glycoproteins, proteoglycans and glycolipids (2). This sulfation often creates specific epitopes that can be recognized by extracellular matrix proteins, cell surface receptors and viruses (3). CHST4, also known as high endothelial cells N-acetylglucosamine 6-O-sulfotransferase (HEC-GlcNAc6ST) or L-selectin ligand sulfotransferases (LSST), catalyzes the transfer of sulfate to position 6 of non-reducing GlcNAc residues within mucin-associated glycans that ultimately serve as L-selectin ligands (4). It has a catalytic preference for core 2-branched mucin-type O-glycans, but also has activity toward core 3 type of O-glycan (5). Human CHST4 shares 72% amino acid sequence identity with the mouse ortholog.

References:

1. deGraffenried, D. and Bertozzi, C.R. (2003) J. Biol. Chem. **278**:40282.
2. Hemmerich, S. and Rosen, S. (2000) Glycobiology **10**:849.
3. Bowman, K. G. and Bertozzi, C. R. (1999) Chem. Biol. **5**:447.
4. Bistrup, A. *et al.* (1999) J. Cell Biol. **145**:899.
5. Uchimura, K. *et al.* (2002) J. Biol. Chem. **277**:3979.
6. Robbins, P.W. (1962) Methods in Enzymology, Vol. V, Academic Press, Inc., New York, 964.
7. MacRae, I.J. I.H. Segel, and A.J. Fisher. (2000) Biochemistry. **39**:1613.
8. Wu, Z.L. *et al.* (2002) Faseb J. **16**:539.