

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carbohydrate Sulfotransferase 3/CHST3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human CHST1 or recombinant mouse CHST3 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 799011
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Carbohydrate Sulfotransferase 3/CHST3 Glu39-Thr479 Accession # Q7LGC8
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

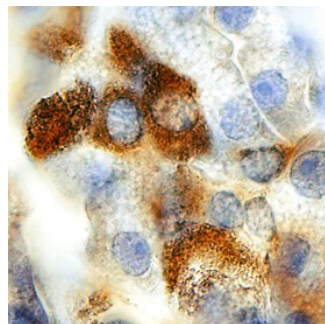
APPLICATIONS

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
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



Carbohydrate Sulfotransferase 3/CHST3 in Human Pancreas. Carbohydrate Sulfotransferase 3/CHST3 was detected in immersion fixed paraffin-embedded sections of human pancreas using Rat Anti-Human Carbohydrate Sulfotransferase 3/CHST3 Monoclonal Antibody (Catalog # MAB7450) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm of endocrine cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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 human CHST family is comprised of 14 enzymes. All members of this family are Golgi-localized type II membrane proteins. 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 (1). This sulfation often creates specific epitopes that can be recognized by extracellular matrix proteins, cell surface receptors and viruses (2). CHST3, also known as chondroitin 6-O-sulfotransferase, transfers sulfate to position 6 of GalNAc residues on chondroitin sulfate (3). Chondroitin sulfate constitutes the predominant proteoglycan present in cartilage and is distributed on the surfaces of many cells and extracellular matrices. Loss of CHST3 function in human results in severe chondrodysplasia (4). CHST3 can also sulfate Gal residues of keratan sulfate and Gal residues in sialyl N-acetyllactosamine (sialyl LacNAc) oligosaccharides (5). The enzymatic activity of the recombinant human CHST3 was measured using a phosphatase-coupled sulfotransferase assay (6).

References:

1. Hemmerich, S. and Rosen, S. (2000) *Glycobiology* **10**:849.
2. Bowman, K. G. and Bertozzi, C. R. (1999) *Chem. Biol.* **5**:447.
3. Uchimura, K. *et al.* (2002) *J. Biol. Chem.* **277**:1443.
4. Thiele, H. *et al.* (2004) *Proc. Natl. Acad. Sci. U. S. A.* **101**:10155.
5. Yusa, A. *et al.* (2006) *J. Biol. Chem.* **281**: 20393.
6. Prather, B. *et al.* (2012) *Anal. Biochem.* **423**:86.