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CHST10 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP17499b

Specification

CHST10 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession O43529

CHST10 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 9486

Other Names
Carbohydrate sulfotransferase 10, 282-, HNK-1 sulfotransferase, HNK-1ST, HNK1ST, HuHNK-1ST, CHST10

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.

CHST10 Antibody (C-term) Blocking Peptide - Protein Information

Name CHST10 {ECO:0000303|PubMed:23269668, ECO:0000312|HGNC:HGNC:19650}

Function
Catalyzes the transfer of sulfate from 3'-phosphoadenylyl sulfate (PAPS) to position 3 of terminal glucuronic acid of both protein- and lipid-linked oligosaccharides. Participates in biosynthesis of HNK-1 carbohydrate structure 3-O-sulfo-beta-D-GlcA- (1->3)-beta-D-Gal-(1->4)-D-GlcNAc-R, a sulfated glucuronyl-lactosaminyl residue carried by many neural recognition molecules, which is involved in cell interactions during ontogenetic development and in synaptic plasticity in the adult. May be indirectly involved in synapse plasticity of the hippocampus, via its role in HNK-1 biosynthesis (PubMed:9478973). Sulfates terminal glucuronyl residue of the laminin globular (LG)-domain binding epitope on DAG1/alpha-dystroglycan and prevents further polymerization by LARGE1 glycosyltransferase. Likely defines the chain length of LG epitope, conferring binding specificity to extracellular matrix components (PubMed:32149355). Plays a role in down-regulating the steroid hormones. Sulfates glucuronidated estrogens and androgens with an impact in hormone cycle and fertility. Has a preference for glucuronyl moiety at the 3-hydroxyl group of a sterol ring rather than the 17-hydroxyl group, showing high catalytic efficiency for 17beta-estradiol 3-O-(beta-D-glucuronate) and dehydroepiandrosterone 3-O-(beta-D-glucuronate) hormones (PubMed:<a href="http://www.uniprot.org/citations/23269668"

target="_blank">23269668).

Cellular Location
Golgi apparatus membrane {ECO:0000250|UniProtKB:O54702}; Single-pass type II membrane protein

Tissue Location
In fetal tissues, it is predominantly expressed in brain, and weakly expressed in lung, kidney and liver. In adult, it is highly expressed in brain, testis, ovary, expressed at intermediate level in heart, pancreas, skeletal muscle, spleen and thymus, and weakly expressed in other tissues. In brain, it is expressed at higher level in the frontal lobe.

CHST10 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

CHST10 Antibody (C-term) Blocking Peptide - Images

CHST10 Antibody (C-term) Blocking Peptide - Background

Cell surface carbohydrates modulate a variety of cellularfunctions and are typically synthesized in a stepwise manner.HNK1ST plays a role in the biosynthesis of HNK1 (see MIM 151290), aneuronally expressed carbohydrate that contains a sulfoglucuronylresidue.

CHST10 Antibody (C-term) Blocking Peptide - References

Zhao, X., et al. Cancer Res. 69(12):5218-5225(2009)Kang, H.G., et al. J. Biol. Chem. 277(38):34766-34772(2002)Ong, E., et al. J. Biol. Chem. 274(36):25608-25612(1999)Ong, E., et al. J. Biol. Chem. 273(9):5190-5195(1998)