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B4GALT4 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP18535c

Specification

B4GALT4 Antibody (Center) Blocking Peptide - Product Information

Primary Accession O60513

B4GALT4 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 8702

Other Names
Beta-1, 4-galactosyltransferase 4, Beta-1, 4-GalTase 4, Beta4Gal-T4, b4Gal-T4, 241-, UDP-Gal:beta-GlcNAc beta-1, 4-galactosyltransferase 4, UDP-galactose:beta-N-acetylglucosamine beta-1, 4-galactosyltransferase 4, N-acetyllactosamine synthase, Nal synthase, Lactotriaosylceramide beta-1, 4-galactosyltransferase, Beta-N-acetylglucosaminyl-glycolipid beta-1, 4-galactosyltransferase, B4GALT4

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.

B4GALT4 Antibody (Center) Blocking Peptide - Protein Information

Name B4GALT4 {ECO:0000303|PubMed:17690104, ECO:0000312|HGNC:HGNC:927}

Function
Galactose (Gal) transferase involved in the synthesis of terminal N-acetyllactosamine (LacNac) unit present on glycan chains of glycoproteins and glycosphingolipids (PubMed:9792633, PubMed:17690104, PubMed:12511560, PubMed:32827291). Catalyzes the transfer of Gal residue via a beta1->4 linkage from UDP-Gal to the non-reducing terminal N-acetyl glucosamine 6-O-sulfate (6-O-sulfoGlcNAc) in the linearly growing chain of both N- and O-linked keratan sulfate proteoglycans. Cooperates with B3GNT7 N-acetyl glucosamine transferase and CHST6 and CHST1 sulfotransferases to construct and elongate mono- and disulfated disaccharide units [->3Galbeta1->4(6- sulfoGlcNAcbeta)1->] and [->3(6-sulfoGalbeta)1->4(6-sulfoGlcNAcbeta)1->] within keratan sulfate polymer (PubMed:17690104). Transfers Gal residue via a beta1->4 linkage to terminal 6-O- sulfoGlcNAc within the LacNac unit of core 2

O-glycans forming 6-sulfo- sialyl-Lewis X (sLex). May contribute to the generation of sLex epitope on mucin-type glycoproteins that serve as ligands for SELL/L-selectin, a major regulator of leukocyte migration (PubMed:12511560). In the biosynthesis pathway of neolacto-series glycosphingolipids, transfers Gal residue via a beta1->4 linkage to terminal GlcNAc of a lactotriaosylceramide (Lc3Cer) acceptor to form a neolactotetraosylceramide (PubMed:9792633).

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

Tissue Location
Highest expression is observed in placenta, pancreas, kidney and heart (PubMed:9792633). Expressed in corneal epithelial cells (PubMed:17690104).

B4GALT4 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

B4GALT4 Antibody (Center) Blocking Peptide - Images

B4GALT4 Antibody (Center) Blocking Peptide - Background

This gene is one of seven beta-1,4-galactosyltransferase(beta4GalT) genes. They encode type II membrane-bound glycoproteinsthat appear to have exclusive specificity for the donor substrateUDP-galactose; all transfer galactose in a beta1,4 linkage tosimilar acceptor sugars: GlcNAc, Glc, and Xyl. Each beta4GalT has adistinct function in the biosynthesis of different glycoconjugatesand saccharide structures. As type II membrane proteins, they havean N-terminal hydrophobic signal sequence that directs the proteinto the Golgi apparatus and which then remains uncleaved to functionas a transmembrane anchor. By sequence similarity, the beta4GalTsform four groups: beta4GalT1 and beta4GalT2, beta4GalT3 andbeta4GalT4, beta4GalT5 and beta4GalT6, and beta4GalT7. The enzymeencoded by this gene appears to mainly play a role in glycolipidbiosynthesis. Two alternatively spliced transcript variants havebeen found for this gene.

B4GALT4 Antibody (Center) Blocking Peptide - References

Clark, H.F., et al. Genome Res. 13(10):2265-2270(2003)Guo, S., et al. Glycobiology 11(10):813-820(2001)Suzuki, Y., et al. Genome Res. 11(5):677-684(2001)Amado, M., et al. Biochim. Biophys. Acta 1473(1):35-53(1999)Fan, Y., et al. Sci. China, C, Life Sci. 42(4):337-345(1999)