

B4GALT4 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP18535c

Product Information

Application	WB, E
Primary Accession	O60513
Other Accession	NP_003769.1
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB38581
Calculated MW	40041
Antigen Region	91-117

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
Target/Specificity	This B4GALT4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 91-117 amino acids from the Central region of human B4GALT4.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	B4GALT4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

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: 12511560 , PubMed: 17690104 , PubMed: 32827291 , PubMed: 9792633). 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). Efficiently galactosylates both non-sulfated and 6-O-sulfated terminal GlcNAc moities on G0 complex-type N-glycans.
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).

Background

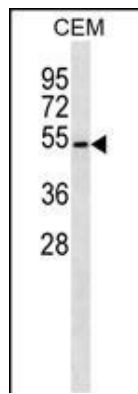
This gene is one of seven beta-1,4-galactosyltransferase (beta4GalT) genes. They encode type II membrane-bound glycoproteins that appear to have exclusive specificity for the donor substrate UDP-galactose; all transfer galactose in a beta1,4 linkage to similar acceptor sugars: GlcNAc, Glc, and Xyl. Each beta4GalT has a distinct function in the biosynthesis of different glycoconjugates and saccharide structures. As type II membrane proteins, they have an N-terminal hydrophobic signal sequence that directs the protein to the Golgi apparatus and which then remains uncleaved to function as a transmembrane anchor. By sequence similarity, the beta4GalTs form four groups: beta4GalT1 and beta4GalT2, beta4GalT3 and beta4GalT4, beta4GalT5 and beta4GalT6, and beta4GalT7. The enzyme encoded by this gene appears to mainly play a role in glycolipid biosynthesis. Two alternatively spliced transcript variants have been found for this gene.

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)

Images

B4GALT4 Antibody (Center) (Cat. #AP18535c) western blot analysis in CEM cell line lysates (35ug/lane).This demonstrates the B4GALT4 antibody detected the



B4GALT4 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.