Rabbit Anti-Human UDP-Gal: BetaGlcNAc Beta 1,4-Galactosyltransferase, Polypeptide 1 Monoclonal Antibody

Cat. No. CAB11479RH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Rabbit monoclonal antibody to human UDP-Gal:betaGlcNAc beta 1,4-galactosyltransferase, polypeptide 1.
Species	Human
Source	Rabbit
Antigen Description	Beta-1,4-galactosyltransferase 1, also known as B4GALT1, GGTB2 and beta4GalT1, is a single-pass type II membrane protein. B4GALT1 is a member of the glycosyltransferase 7 family. It is ubiquitously expressed but at very low levels in fetal and adult brain. By sequence similarity, the beta4GalTs form four groups: beta4GalT1 and beta4GalT2, beta4GalT3 and beta4GalT4, beta4GalT5 and beta4GalT6, and beta4GalT7. B4GALT1 is an enzyme that functions in the synthesis of glycoconjugates It has two flexible loops, one short and one long. Upon binding a metal ion and UDP-galactose, the loops change from an open to a closed conformation, repositioning residues to lock the ligands in place. B4GALT1 is one of the best-studied glycosyltransferases. It plays a key role in the synthesis of selectin ligands. B4GALT1 may play an important role in the inflammation reaction. Defects in B4GALT1 are the cause of congenital disorder of glycosylation type 2D (CDG2D). CDGs are a family of severe inherited diseases caused by a defect in protein N-glycosylation.
Specificity	Human B4GALT1 / GGTB2. No cross-reactivity with human cell lysate (293 cell line)

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	in WB and ELISA.
Immunogen	Recombinant human B4GALT1 protein
Isotype	Rabbit IgG
Clone	002
Applications	Western Blot; ELISA
Dilution	Western blot: This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human B4GALT1 in WB. Using a DAB detection system, the detection limit for human B4GALT1 is approximately 1 ng/lane under non-reducing conditions and 0.125 ng/lane under reducing conditions.Direct ELISA: This antibody can be used at 0.1 - 0.2 µg/mL with the appropriate secondary reagents to detect human B4GALT1. The detection limit for human B4GALT1 is approximately 0.039 ng/well.
Preparation	This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant human B4GALT1 / GGTB2.
Format	0.2 µm filtered solution in PBS with 5% trehalose
Storage	This antibody can be stored at 2-8 °C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 °C to -70 °C. Preservative-Free.Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

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Gene Name	B4GALT1 UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1 [Homo sapiens]
Official Symbol	B4GALT1
Synonyms	B4GALT1; UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1; GGTB2; beta-1,4-galactosyltransferase 1; beta4Gal T1; lactose synthase; beta-1,4-GalTase 1; glycoprotein-4-beta-galactosyltransferase 2; UDP-Gal:beta-GlcNAc beta-1,4-galactosyltransferase 1; UDP-galactose:beta-N-acetylglucosamine beta-1,4-galactosyltransferase 1; GT1; GTB; CDG2D; B4GAL-T1; beta4Gal-T1; MGC50983; DKFZp686N19253;
Gene ID	2683
mRNA Refseq	NM_001497
Protein Refseq	NP_001488
MIM	137060
UniProt ID	P15291
Chromosome Location	9p13
Pathway	Asparagine N-linked glycosylation, organism-specific biosystem; Galactose metabolism, organism-specific biosystem; Galactose metabolism, conserved biosystem; Glycosaminoglycan biosynthesis - keratan sulfate, organism-specific biosystem; Glycosaminoglycan biosynthesis - keratan sulfate, conserved biosystem; Glycosphingolipid biosynthesis - lacto and neolacto series, organism-specific biosystem; Glycosphingolipid biosynthesis - lacto and neolacto series, conserved

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	biosystem;
Function	N-acetyllactosamine synthase activity; UDP-galactosyltransferase activity; alpha-tubulin binding; beta-N-acetylglucosaminylglycopeptide beta-1,4-galactosyltransferase activity; beta-tubulin binding; cytoskeletal protein binding; galactosyltransferase activity; lactose synthase activity; metal ion binding; protein homodimerization activity; transferase activity, transferring glycosyl groups;

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