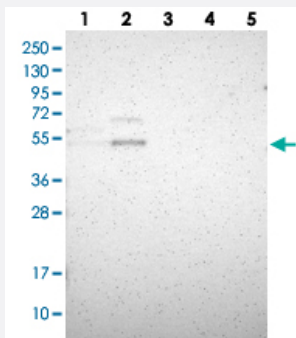


B4GALT1 polyclonal antibody

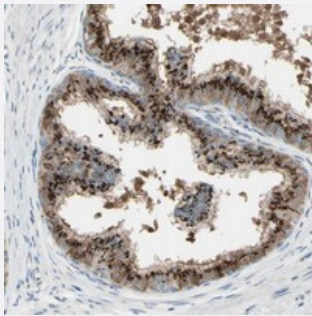
Catalog # PAB20512 Size 100 uL

Applications



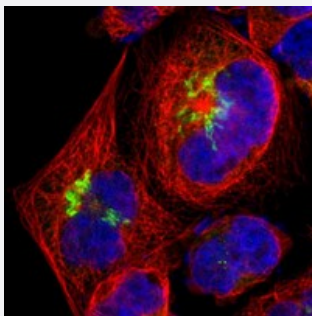
Western Blot

Western blot analysis of Lane 1: RT-4, Lane 2: U-251 MG, Lane 3: Human Plasma, Lane 4: Liver, Lane 5: Tonsil with B4GALT1 polyclonal antibody (Cat # PAB20512) at 1:250-1:500 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemical staining of human prostate with B4GALT1 polyclonal antibody (Cat # PAB20512) shows strong granular cytoplasmic positivity in glandular cells at 1:50-1:200 dilution.



Immunofluorescence

Immunofluorescent staining of human cell line A-431 with B4GALT1 polyclonal antibody (Cat # PAB20512) at 1-4 ug/mL dilution shows positivity in golgi apparatus.

Specification

Product Description

Rabbit polyclonal antibody raised against recombinant B4GALT1.

Immunogen

Recombinant protein corresponding to amino acids of human B4GALT1.

Sequence	LPQLVGVSTPLQGGSNSAAAIGQSSGELRTGGARPPPPLGASSQPRPGGDSSPVVDSGPGPAS NLTSVPVPHTTALSLPACPEESPLLVGPMLEFNMPVDLELVAKQNPVVKM
Host	Rabbit
Reactivity	Human
Form	Liquid
Purification	Antigen affinity purification
Isotype	IgG
Recommend Usage	Immunohistochemistry (1:50-1:200) Western Blot (1:250-1:500) Immunofluorescence (1-4 ug/mL) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, pH 7.2 (40% glycerol, 0.02% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Applications

- Western Blot

Western blot analysis of Lane 1: RT-4, Lane 2: U-251 MG, Lane 3: Human Plasma, Lane 4: Liver, Lane 5: Tonsil with B4GALT1 polyclonal antibody (Cat # PAB20512) at 1:250-1:500 dilution.

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

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Immunofluorescent staining of human cell line A-431 with B4GALT1 polyclonal antibody (Cat # PAB20512) at 1-4 ug/mL dilution shows positivity in golgi apparatus.

Gene Info — B4GALT1

Entrez GeneID [2683](#)

Protein Accession# [P15291](#)

Gene Name	B4GALT1
Gene Alias	B4GAL-T1, DKFZp686N19253, GGTB2, GT1, GTB, MGC50983, beta4Gal-T1
Gene Description	UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase, polypeptide 1
Omim ID	137060 607091
Gene Ontology	Hyperlink
Gene Summary	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. This gene is unique among the beta4GalT genes because it encodes an enzyme that participates both in glycoconjugate and lactose biosynthesis. For the first activity, the enzyme adds galactose to N-acetylglucosamine residues that are either monosaccharides or the nonreducing ends of glycoprotein carbohydrate chains. The second activity is restricted to lactating mammary tissue where the enzyme forms a heterodimer with alpha-lactalbumin to catalyze UDP-galactose + D-glucose $\rightleftharpoons$ UDP + lactose. The two enzymatic forms result from alternate transcription initiation sites and post-translational processing. Two transcripts, which differ only at the 5' end, with approximate lengths of 4.1 kb and 3.9 kb encode the same protein. The longer transcript encodes the type II membrane-bound, trans-Golgi resident protein involved in glycoconjugate biosynthesis. The shorter transcript encodes a protein which is cleaved to form the soluble lactose synthase. [provided by RefSeq]
Other Designations	OTTHUMP00000021196 UDP-Gal:betaGlcNAc beta 1,4- galactosyltransferase 1, membrane-bound form glycoprotein-4-beta-galactosyltransferase 2 lactose synthase A protein

Publication Reference

- [Decreased B4GALT1 promotes hepatocellular carcinoma cell invasiveness by regulating the laminin-integrin pathway.](#)

Po-Da Chen, Ying-Yu Liao, Yu-Chia Cheng, Hsin-Yi Wu, Yao-Ming Wu, Min-Chuan Huang.

Oncogenesis 2023 Oct; 12(1):49.

Application: IHC, WB, Human, 44As3, Caco-2, DLD-1HA22T, HCT116, Hep3B, HepG2, Huh7, MKN45, NUGC-3, PLC5, SNU387, SKHEP1, SW480, SW620, Human liver

- [Immunosuppression by Mutated Calreticulin Released from Malignant Cells.](#)

Liu P, Zhao L, Loos F, Marty C, Xie W, Martins I, Lachkar S, Qu B, Waeckel-Énée E, Plo I, Vainchenker W, Perez F, Rodriguez D, López-Otin C, van Endert P, Zitvogel L, Kepp O, Kroemer G.

Molecular Cell 2020 Feb; 77(4):748.

Application: IF, Human, RUSH, U-2 OS cells

- [Artificial tethering of LC3 or p62 to organelles is not sufficient to trigger autophagy.](#)

Loos F, Xie W, Sica V, Bravo-San Pedro JM, Souquère S, Pierron G, Lachkar S, Sauvat A, Petrazzuolo A, Jimenez AJ, Perez F, Maiuri MC, Kepp O, Kroemer G.

Cell Death & Disease 2019 Oct; 10(10):771.

Application: IF, Human, U2OS cells

- [Photodynamic therapy with redaporfin targets the endoplasmic reticulum and Golgi apparatus.](#)

Gomes-da-Silva LC, Zhao L, Bezu L, Zhou H, Sauvat A, Liu P, Durand S, Leduc M, Souquere S, Loos F, Mondragón L, Sveinbjørnsson B, Rekdal Ø, Boncompain G, Perez F, Arnaut LG, Kepp O, Kroemer G.

The EMBO Journal 2018 Jul; 37(13:e98354.

Application: IF, WB, Human, U2OS cells

- [Identification of pharmacological inhibitors of conventional protein secretion.](#)

Zhao L, Liu P, Boncompain G, Loos F, Lachkar S, Bezu L, Chen G, Zhou H, Perez F, Kepp O, Kroemer G.

Scientific Reports 2018 Oct; 8(1):14966.

Application: IF, Human, U-2 OS cells

- [Type 2 Diabetes Biomarkers and Uses Thereof.](#)

Eustache Paramithiotis, Marc Prentki, Rème Rabasa-Ihoret, Pascal Croteau, Joel Lanoix, Murthy S. R. Madiraju, Érik Joly
United States Patent Application Publication 2015 Nov; [Epub].

Application: IF, WB, Human, Mouse, Rat, Islets, INS832/13, MIN6 cells

Pathway

- [Galactose metabolism](#)
- [Glycosphingolipid biosynthesis - lacto and neolacto series](#)
- [Keratan sulfate biosynthesis](#)
- [Metabolic pathways](#)
- [N-Glycan biosynthesis](#)

Disease

- [Alzheimer disease](#)
- [Cerebral Amyloid Angiopathy](#)

- [Genetic Predisposition to Disease](#)
- [Neuroblastoma](#)
- [Tobacco Use Disorder](#)