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GCNT1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2404a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q02742
Other Accession	NP_001481
Reactivity	Human, Mouse
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4836
Calculated MW	49799
Antigen Region	88-117

Additional Information

Gene ID	2650
Other Names	Beta-1, 3-galactosyl-O-glycosyl-glycoprotein beta-1, 6-N-acetylglucosaminyltransferase, Core 2-branching enzyme, Core2-GlcNAc-transferase, C2GNT, Core 2 GNT, GCNT1, NACGT2
Target/Specificity	This GCNT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 88-117 amino acids from the Central region of human GCNT1.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	GCNT1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GCNT1
Synonyms	NACGT2

Function	Glycosyltransferase that catalyzes the transfer of an N- acetylglucosamine (GlcNAc) moiety in beta1-6 linkage from UDP-GlcNAc onto mucin-type core 1 O-glycan to form the branched mucin-type core 2 O-glycan (PubMed:1329093, PubMed:23027862). The catalysis is metal ion- independent and occurs with inversion of the anomeric configuration of sugar donor (By similarity). Selectively involved in synthesis of mucin-type core 2 O-glycans that serve as scaffolds for the display of selectin ligand sialyl Lewis X epitope by myeloid cells, with an impact on homeostasis and recruitment to inflammatory sites (By similarity). Can also act on glycolipid substrates. Transfers GlcNAc moiety to GalGb4Cer globosides in a reaction step to the synthesis of stage- specific embryonic antigen 1 (SSEA-1) determinant (By similarity). Can use Galbeta1-3GalNAcalpha1- and Galbeta1-3GalNAcbeta1- oligosaccharide derivatives as acceptor substrates (By similarity).
Cellular Location	Golgi apparatus membrane; Single-pass type II membrane protein. Note=Also detected in the trans-Golgi network
Tissue Location	Highly expressed in activated T-lymphocytes and myeloid cells

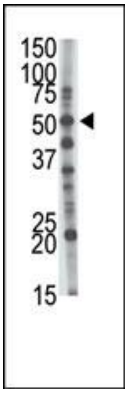
Background

Glycosylation is one of the most universal but at the same time complex protein modifications. Modification with sugar moeties can be both co- translational and post- translational, occurring in the endoplasmatic reticulum and golgi. Three different forms of glycosylation can be distinguished: N-linked oligosaccharides, O-linked oligosaccharides and glycosyl- phosphatidylinositol (GPI-) anchors. Glycosylation results in thousands of distinct, bioactive glycoproteins resident throughout the cell that strongly determine protein-protein, carbohydrate-protein, membrane, and adhesion properties. Diseases associated with glycosylation defects include Congenital disorders of glycosylation, (CDG), also known as carbohydrate deficient glycoprotein syndromes, and diseases associated with advanced aging.

References

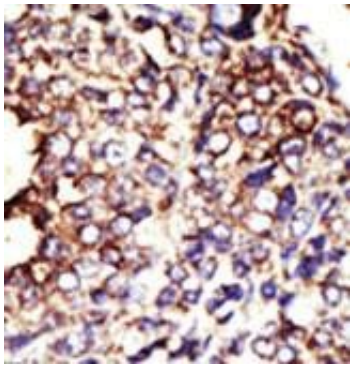
Bierhuizen, M.F., et al., Glycobiology 5(4):417-425 (1995).
Bierhuizen, M.F., et al., Proc. Natl. Acad. Sci. U.S.A. 89(19):9326-9330 (1992).

Images



The anti-GCNT1 Pab (Cat. #AP2404a) is used in Western blot to detect GCNT1 in mouse kidney tissue lysate.

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma;



HC = hepatocarcinoma.

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