10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GCNT1 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2404a

Specification

GCNT1 Antibody (Center) - Product Information

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

GCNT1 Antibody (Center) - 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~~1:50~100
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.

GCNT1 Antibody (Center) - 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

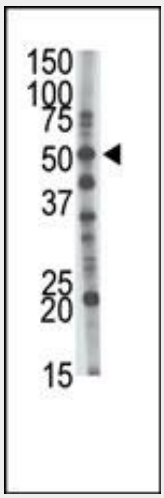
Tissue Location
Highly expressed in activated T-lymphocytes and myeloid cells

GCNT1 Antibody (Center) - Protocols

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

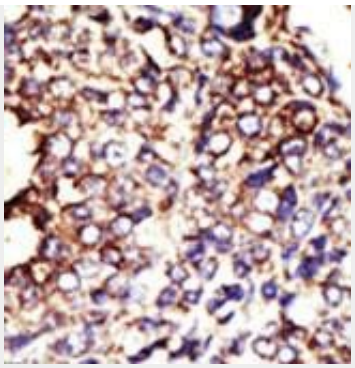
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GCNT1 Antibody (Center) - Images



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

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



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.

GCNT1 Antibody (Center) - 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.

GCNT1 Antibody (Center) - 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).