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

GCNT1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP2404b

Specification

GCNT1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession	Q02742
Other Accession	NP_001481

GCNT1 Antibody (C-term) Blocking Peptide - 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
The synthetic peptide sequence used to generate the antibody AP2404b was selected from the C-term region of human GCNT1 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GCNT1 Antibody (C-term) Blocking Peptide - 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 (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

GCNT1 Antibody (C-term) Blocking Peptide - Images

GCNT1 Antibody (C-term) Blocking Peptide - 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 (C-term) Blocking Peptide - 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).