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

GCNT1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17151c

Product Information

Application	WB, E
Primary Accession	Q02742
Other Accession	NP_001091103.1, NP_001091102.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36189
Calculated MW	49799
Antigen Region	63-91

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 63-91 amino acids from the Central region of human GCNT1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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

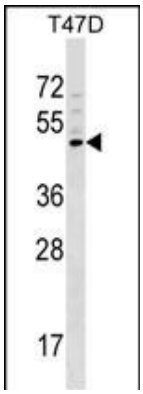
Background

This gene is a member of the beta-1,6-N-acetylglucosaminyltransferase gene family. It is essential to the formation of Gal beta 1-3(GlcNAc beta 1-6)GalNAc structures and the core 2 O-glycan branch. The gene coding this enzyme was originally mapped to 9q21, but was later localized to 9q13. Multiple alternatively spliced variants, encoding the same protein, have been identified.

References

Hatakeyama, S., et al. Int. J. Cancer 127(5):1052-1059(2010)
Brockhausen, I., et al. Biochim. Biophys. Acta 1790(10):1244-1257(2009)
St Hill, C.A., et al. BMC Cancer 9, 79 (2009) :
Nagaraj, S., et al. Pancreas 37(3):321-327(2008)
Julien, S., et al. J. Immunol. 179(9):5701-5710(2007)

Images



GCNT1 Antibody (Center) (Cat. #AP17151c) western blot analysis in T47D cell line lysates (35ug/lane).This demonstrates the GCNT1 antibody detected the GCNT1 protein (arrow).