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MGAT5 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13815b

Product Information

Application	WB, FC, E
Primary Accession	Q09328
Other Accession	NP_002401.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32080
Calculated MW	84543
Antigen Region	652-680

Additional Information

Gene ID	4249
Other Names	Alpha-1, 6-mannosylglycoprotein 6-beta-N-acetylglucosaminyltransferase A, Alpha-mannoside beta-1, 6-N-acetylglucosaminyltransferase, GlcNAc-T V, GNT-V, Mannoside acetylglucosaminyltransferase 5, N-acetylglucosaminyl-transferase V, MGAT5, GGNT5
Target/Specificity	This MGAT5 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 652-680 amino acids from the C-terminal region of human MGAT5.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	MGAT5 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MGAT5
Synonyms	GGNT5

Function	Catalyzes the addition of N-acetylglucosamine (GlcNAc) in beta 1-6 linkage to the alpha-linked mannose of biantennary N-linked oligosaccharides (PubMed:10395745, PubMed:30140003). Catalyzes an important step in the biosynthesis of branched, complex-type N-glycans, such as those found on EGFR, TGFR (TGF-beta receptor) and CDH2 (PubMed:10395745, PubMed:22614033, PubMed:30140003). Via its role in the biosynthesis of complex N-glycans, plays an important role in the activation of cellular signaling pathways, reorganization of the actin cytoskeleton, cell-cell adhesion and cell migration. MGAT5-dependent EGFR N-glycosylation enhances the interaction between EGFR and LGALS3 and thereby prevents rapid EGFR endocytosis and prolongs EGFR signaling. Required for efficient interaction between TGFB1 and its receptor. Enhances activation of intracellular signaling pathways by several types of growth factors, including FGF2, PDGF, IGF, TGFB1 and EGF. MGAT5-dependent CDH2 N-glycosylation inhibits CDH2-mediated homotypic cell-cell adhesion and contributes to the regulation of downstream signaling pathways. Promotes cell migration. Contributes to the regulation of the inflammatory response. MGAT5-dependent TCR N- glycosylation enhances the interaction between TCR and LGALS3, limits agonist-induced TCR clustering, and thereby dampens TCR-mediated responses to antigens. Required for normal leukocyte evasation and accumulation at sites of inflammation (By similarity). Inhibits attachment of monocytes to the vascular endothelium and subsequent monocyte diapedesis (PubMed:22614033).
Cellular Location	Golgi apparatus membrane {ECO:0000250|UniProtKB:P97259}; Single-pass type II membrane protein

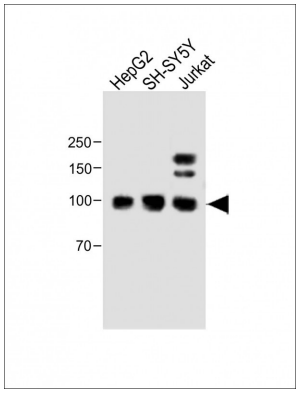
Background

This gene encodes mannosyl (alpha-1,6-)-glycoprotein beta-1,6-N-acetyl-glucosaminyltransferase, a glycosyltransferase involved in the synthesis of protein-bound and lipid-bound oligosaccharides. Alterations of the oligosaccharides on cell surface glycoproteins cause significant changes in the adhesive or migratory behavior of a cell. Increase in the encoded protein's activity may correlate with the progression of invasive malignancies.

References

Dick, D.M., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (6), 1179-1188 (2010) :
Brynedal, B., et al. J. Neuroimmunol. 220 (1-2), 120-124 (2010) :
Benson, V., et al. Int. Immunol. 22(3):167-177(2010)
Wang, C., et al. J. Cell. Biochem. 109(1):113-123(2010)
Ding, H., et al. Stroke 41(1):177-180(2010)

Images



All lanes: Anti-MGAT5 Antibody (C-term) at 1:500 dilution Lane 1: HepG2 whole cell lysate Lane 2: SH-SY5Y whole cell lysate Lane 3: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 100 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

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