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MGAT3 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP2411a

Specification

MGAT3 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession	Q09327
Other Accession	NP_002400

MGAT3 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 4248

Other Names
Beta-1, 4-mannosyl-glycoprotein 4-beta-N-acetylglucosaminyltransferase, N-glycosyl-oligosaccharide-glycoprotein N-acetylglucosaminyltransferase III, GNT-III, GlcNAc-T III, N-acetylglucosaminyltransferase III, MGAT3, GGNT3

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2411a was selected from the N-term region of human MGAT3 . 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.

MGAT3 Antibody (N-term) Blocking Peptide - Protein Information

Name MGAT3 (HGNC:7046)

Synonyms GGNT3

Function
It is involved in the regulation of the biosynthesis and biological function of glycoprotein oligosaccharides. Catalyzes the addition of N-acetylglucosamine in beta 1-4 linkage to the beta-linked mannose of the trimannosyl core of N-linked sugar chains, called bisecting N-acetylglucosamine (GlcNAc). It is one of the most important enzymes involved in the regulation of the biosynthesis of glycoprotein oligosaccharides. The addition of this bisecting GlcNAc residue alters not only the composition, but also the conformation of the N-glycan. The introduction of the bisecting GlcNAc residue results in the suppression of further processing and elongation of

N-glycans, precluding the formation of beta-1,6 GlcNAc branching, catalyzed by MGAT5 since it is unable to use the bisected oligosaccharide as a substrate (PubMed:19403558). Addition of bisecting N-acetylglucosamine to CDH1/E-cadherin modulates CDH1 cell membrane location (PubMed:19403558). Inhibits NeuAc-alpha-2,3-Gal-beta-1,4- GlcNAc- formation which modulates sialylation levels and plays a role in cell migration regulation (PubMed:26801611). In brain, addition of bisecting N-acetylglucosamine to BACE1 blocks its lysosomal targeting in response to oxidative stress and further degradation which increases its location to early endosome and the APP cleavage (By similarity).

Cellular Location
Golgi apparatus membrane; Single-pass type II membrane protein

MGAT3 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

MGAT3 Antibody (N-term) Blocking Peptide - Images

MGAT3 Antibody (N-term) Blocking Peptide - Background

There are believed to be over 100 different glycosyltransferases involved in the synthesis of protein-bound and lipid-bound oligosaccharides. MGAT3 (N-acetylglucosaminyltransferase III) transfers a GlcNAc residue to the beta-linked mannose of the trimannosyl core of N-linked oligosaccharides and produces a bisecting GlcNAc. Expression of this gene may be controlled by a multiple-promoter system.

MGAT3 Antibody (N-term) Blocking Peptide - References

Shibukawa, Y., et al., J. Biol. Chem. 278(5):3197-3203 (2003).Koyama, N., et al., Eur. J. Biochem. 238(3):853-861 (1996).Kim, Y.J., et al., Gene 170(2):281-283 (1996).Ihara, Y., et al., J. Biochem. 113(6):692-698 (1993).