

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

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**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](/product/products/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:<a href="http://www.uniprot.org/citations/19403558" target="\_blank">19403558</a>). Addition of bisecting N-acetylglucosamine to CDH1/E-cadherin modulates CDH1 cell membrane location (PubMed:<a href="http://www.uniprot.org/citations/19403558" target="\_blank">19403558</a>). Inhibits NeuAc-alpha-2,3-Gal-beta-1,4- GlcNAc- formation which modulates sialylation levels and plays a role in cell migration regulation (PubMed:<a href="http://www.uniprot.org/citations/26801611" target="\_blank">26801611</a>). 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).