

**MGAT3 Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP2411a****Specification**

---

**MGAT3 Antibody (N-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">Q09327</a>
Other Accession	<a href="#">NP_002400</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	61313
Antigen Region	72-102

**MGAT3 Antibody (N-term) - 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**

This MGAT3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 72-102 amino acids from the N-terminal region of human MGAT3.

**Dilution**

WB~~1:1000  
IHC-P~~1:100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**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**

MGAT3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**MGAT3 Antibody (N-term) - 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

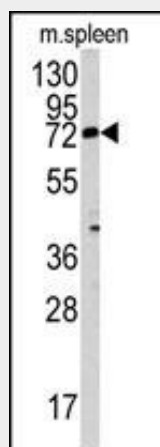
Golgi apparatus membrane; Single-pass type II membrane protein

## MGAT3 Antibody (N-term) - Protocols

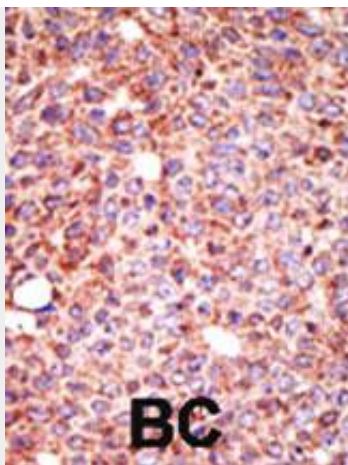
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

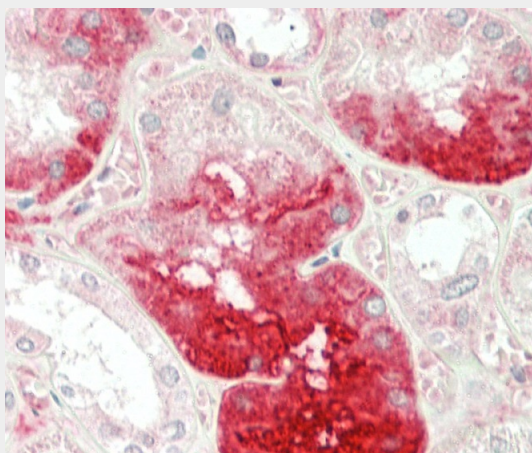
## MGAT3 Antibody (N-term) - Images



Western blot analysis of MGAT3 antibody (N-term) (Cat.# AP2411a) in mouse spleen tissue lysates (35ug/lane). MGAT3 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded H.kidney tissue reacted with MGAT3 Antibody (N-term) (Cat#AP2411a).

#### **MGAT3 Antibody (N-term) - 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) - 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).