

#### DESCRIPTION

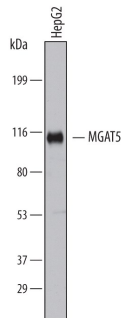

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human N-Acetylglucosaminyltransferase V/MGAT5 in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2A</sub> Clone # 706824
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human N-Acetylglucosaminyltransferase V/MGAT5 Leu189-Leu741 Accession # Q09328
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	2 µg/mL	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below

#### DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human N-Acetylglucosaminyltransferase V/MGAT5 by Western Blot.</b> Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human N-Acetylglucosaminyltransferase V/MGAT5 Monoclonal Antibody (Catalog # MAB5469) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for N-Acetylglucosaminyltransferase V/MGAT5 at approximately 100 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Immunocytochemistry</b></p>  <p><b>N-Acetylglucosaminyltransferase V/MGAT5 in MCF-7 Human Cell Line.</b> N-Acetylglucosaminyltransferase V/MGAT5 was detected in immersion fixed MCF-7 human breast cancer cell line using Mouse Anti-Human N-Acetylglucosaminyltransferase V/MGAT5 Monoclonal Antibody (Catalog # MAB5469) at 25 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to plasma membranes and cytoplasm. View our protocol for <a href="#">Fluorescent ICC Staining of Cells on Coverslips</a>.</p>
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#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

N-Acetylglucosaminyltransferase V (GnT-V), also known as mannosylglycoprotein N-acetylglucosaminyltransferase 5 (MGAT5), adds an N-acetylglucosamine to the α1-6-linked core mannose of an N-linked oligosaccharide in the Golgi apparatus (1). This reaction is the committing step for the biosynthesis of β1-6GlcNAc-branched arm in N-glycans. The degree of N-glycan branching has been shown to regulate cell proliferation and differentiation (2). An increase in the GnT-V activity and its glycan products is also known to positively correlate with the progression of invasive malignancies (3, 4). For example, ectopic expression of GnT-V in epithelial cells results in morphological transformation and tumor growth in mice and overexpression in carcinoma cells has been shown to induce metastatic spread (3-5).

#### References:

1. Saito, H. *et al.* (1994) *Biochem. Biophys. Res. Commun.* **198**:318.
2. Lau, K.S. *et al.* (2007) *Cell* **198**:123.
3. Dennis, J.W. *et al.* (2002) *Biochim. Biophys. Acta* **1573**:414.
4. Granovsky, M. *et al.* (2008) *Nat. Med.* **7**:1.
5. Kim, Y.S. *et al.* (2008) *Mol. Cell. Proteomics* **7**:1.