

DESCRIPTION

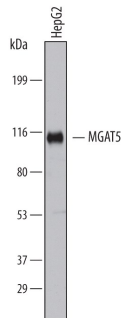
Species Reactivity	Human
Specificity	Detects human N-Acetylglucosaminyltransferase V/MGAT5 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2A} Clone # 706824
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human N-Acetylglucosaminyltransferase V/MGAT5 Leu189-Leu741 Accession # Q09328
Formulation	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.

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

DATA

<p>Western Blot</p>  <p>Detection of Human N-Acetylglucosaminyltransferase V/MGAT5 by Western Blot. 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>Immunocytochemistry</p>  <p>N-Acetylglucosaminyltransferase V/MGAT5 in MCF-7 Human Cell Line. 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 Fluorescent ICC Staining of Cells on Coverslips.</p>
---	---

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.