Human Glucosaminyl (N-acetyl) Transferase 1/GCNT1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF7248

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Glucosaminyl (N-acetyl) Transferase 1/GCNT1 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Glucosaminyl (N-acetyl) Transferase 1/GCNT1 Arg33-His428 Accession # NP_001481
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 either lyophilized or as a 0.2 μm filtered solution in PBS.

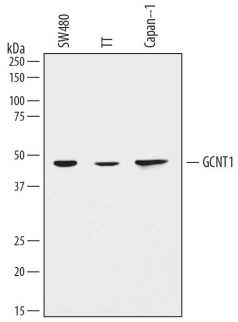
APPLICATIONS

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	1 µg/mL	See Below
Immunocytochemistry	5-15 µg/mL	See Below
Immunohistochemistry	3-15 µg/mL	See Below

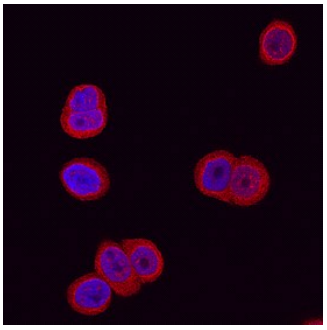
DATA

Western Blot



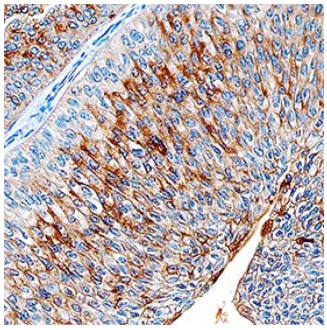
Detection of Human Glucosaminyl (N-acetyl) Transferase 1/GCNT1 by Western Blot. Western blot shows lysates of SW480 human colorectal adenocarcinoma cell line, TT human medullary thyroid cancer cell line, and Capan-1 human pancreatic adenocarcinoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Glucosaminyl (N-acetyl) Transferase 1/GCNT1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7248) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Glucosaminyl (N-acetyl) Transferase 1/GCNT1 at approximately 50 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Glucosaminyl (N-acetyl) Transferase 1/GCNT1 in HT-29 human cell line. Glucosaminyl (N-acetyl) Transferase 1/GCNT1 was detected in immersion fixed HT-29 human colon adenocarcinoma cell line using Sheep Anti-Human Glucosaminyl (N-acetyl) Transferase 1/GCNT1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7248) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to plasma membrane and cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



Glucosaminyl (N-acetyl) Transferase 1/GCNT1 in Human Bladder Cancer Tissue. Glucosaminyl (N-acetyl) Transferase 1/GCNT1 was detected in immersion fixed paraffin-embedded sections of human bladder cancer tissue using Sheep Anti-Human Glucosaminyl (N-acetyl) Transferase 1/GCNT1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7248) at 3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to plasma membrane in smooth muscle cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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.** ● 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.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human Glucosaminyl (N-acetyl) Transferase 1/GCNT1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7248

BACKGROUND

Mucin-type O-glycans are initiated with an O-GalNAc attachment to a serine or threonine in a polypeptide. The O-GalNAc residues are subsequently extended by various glycosyltransferases resulting in different types of O-glycans. Most O-glycans contain the core 1 structure, Galβ1-3GalNAc. Glucosaminyl (N-acetyl) Transferase 1 (GCNT1) converts the core 1 O-glycan to core 2 O-glycan, Galβ1-3(GlcNAcβ1-6)GalNAc, via the addition of a GlcNAc residue (1, 2). Various ligand carbohydrates can be formed from core 2 branched oligosaccharides. For example, sialyl Le^x in mucin-type glycoproteins of blood cells can be formed from core 2 branched oligosaccharides (3, 4). The expression of GCNT1 was found to be associated with the progression of various types of cancer (5, 6, 7). The enzymatic activity of the recombinant GCNT1 is measured using a phosphatase-coupled method (8).

References:

1. Bierhuizen, M.F. (1993) Genes & Development **7**:468.
2. Yeh, J.C. *et al.* (1999) J. Biol. Chem. **274**:3215.
3. Hemmerich, S. *et al.* (1995) J. Biol. Chem. **270**:12035.
4. Wilkins, P.P. *et al.* (1996) J. Biol. Chem. **270**:18732.
5. Shimodaira, K. *et al.* (1997) Cancer Res. **57**: 5201.
6. Hatakyama, S. *et al.* (2010) Int. J. Cancer **127**:1052.
7. St Hill, C.A. *et al.* (2009) BMC Cancer **9:**79.
8. Wu, Z.L. *et al.* (2011) Glycobiology **21**:727.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449