Human Polypeptide GalNac Transferase 2/ GALNT2 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF7507

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Polypeptide GalNac Transferase 2/GALNT2 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) GALNT1 and rhGALNTL-1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Polypeptide GalNac Transferase 2/GALNT2 Lys52-Gln571 Accession # Q10471
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.

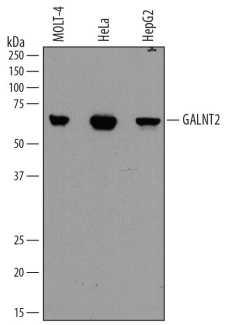
APPLICATIONS

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

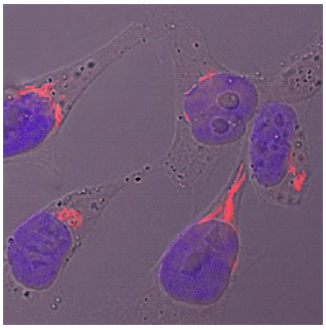
DATA

Western Blot



Detection of Human Polypeptide GalNac Transferase 2/GALNT2 by Western Blot. Western blot shows lysates of MOLT-4 human acute lymphoblastic leukemia cell line, HeLa human cervical epithelial carcinoma cell line, and HepG2 human hepatocellular carcinoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Polypeptide GalNac Transferase 2/GALNT2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7507) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Polypeptide GalNac Transferase 2/GALNT2 at approximately 65-70 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Polypeptide GalNac Transferase 2/GALNT2 in HeLa Human Cell Line. Polypeptide GalNac Transferase 2/GALNT2 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Sheep Anti-Human Polypeptide GalNac Transferase 2/GALNT2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7507) at 1.7 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 the trans-Golgi secretory reticulum. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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.

BACKGROUND

GALNT2 (N-Acetyl-Galactoseaminyl Transferase 2; also UDP-Acetylgalactosaminyltransferase 2 and ppGalNAc-T2) is a 68-74 kDa member of the GalNAC transferase subfamily, glycosyltransferase 2 family of enzymes. It is widely expressed, being found on basal keratinocytes, hepatocytes, B cells, renal tubular epithelium, and virtually all cell lines examined to date. GALNT2 is found in the Golgi apparatus, and catalyzes the transfer of UDP-GalNAC onto either a Ser or Thr residue on a previously glycosylated peptide/polypeptide backbone. The generation of O-linked carbohydrates is believed to play a role in cytokine proteolytic processing, as the presence of O-linked sugar adjacent to a PC processing site is known to inhibit proteolysis and molecule inactivation. Human GALNT2 is a 571 amino acid (aa) type II transmembrane protein. It contains a six aa N-terminal cytoplasmic region and a 547 aa extracellular domain (aa 25-571). The ECD possesses two key parts, a catalytic region with two catalytic subdomains (aa 135-240 and 300-362), and a ricin-type lectin domain that binds carbohydrates (aa 456-566). The latter domain is suggested to facilitate GALNT2 action by imparting specificity and stability to the overall enzyme activity. A 52 kDa soluble form of GALNT2 has been reported that begins at Lys52. There are two potential splice form variants. Both contain a four aa substitution for aa 1-42, and one contains an additional four aa substitution for aa 543-571. Over aa 52-571, human GALNT2 shares 97% aa sequence identity with mouse GALNT2.

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