Human Polypeptide GalNac Transferase 1/ GALNT1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF7140

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Polypeptide GalNac Transferase 1/GALNT1 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) GALNT2 and rhGALNT3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Polypeptide GalNac Transferase 1/GALNT1 Gly41-Phe559 Accession # Q10472
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.

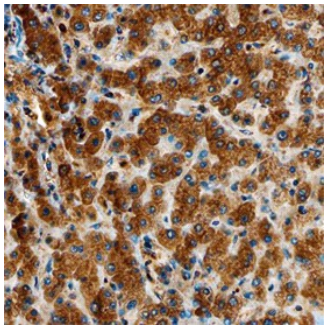
APPLICATIONS

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	0.1 µg/mL	Recombinant Human Polypeptide GalNac Transferase 1/GALNT1 (Catalog # 7140-GT)
Immunohistochemistry	5-15 µg/mL	See Below

DATA

Immunohistochemistry



Polypeptide GalNac Transferase 1/GALNT1 in Human Liver. Polypeptide GalNac Transferase 1/GALNT was detected in immersion fixed paraffin-embedded sections of human liver using Sheep Anti-Human Polypeptide GalNac Transferase 1/GALNT1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7140) at 1 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). 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 cytoplasm of hepatocytes. 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
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human Polypeptide GalNac Transferase 1/ GALNT1 Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF7140

BACKGROUND

O-glycosylation is a ubiquitous post-translational modification of secreted and membrane-bound proteins. Polypeptide N-acetylgalactosaminyltransferases (GALNTs) calalyze the initial step for o-glycosylation: transferring GalNAc to Thr or Ser residues (GalNAc α1-O-Ser/Thr) in the Golgi compartment. Structurally, the GALNTs consist of an N-terminal catalytic domain tethered by a short linker to a C-terminal ricin-like lectin domain containing three potential carbohydrate-binding sites (1, 2). Twenty distinct GALNT isoforms have been detected in humans. Most of the isoforms display both unique and overlapping substrate specificities (3, 4) with no universal consensus glycosylation sequence. Glycosylation of mucins results from successive, often hierarchical, action of several specific GALNTs (5). GALNT1, in particular, is involved in the glycosylation of proteins essential for bone formation such as osteopontin and bone sialoprotein (6). Using a peptide library screening approach, GALNT1 was classified as an early transferase that has a preference for nonglycosylated or monoglycosylated substrates (5). The enzymatic activity of recombinant human GALNT1 was determined using a phosphatase-coupled assay (7).

References:

1. Gerken, T.A. *et al.* (2011) J. Biol. Chem. **286**:14493.
2. Ten Hagen, K.G. *et al.* (2003) Glycobiology **13**:1R.
3. Hagen, F.K. *et al.* (1997) J. Biol. Chem. **272**:13843.
4. Gerken, T.A. *et al.* (2006) J. Biol. Chem. **281**:32403.
5. Pratt, M.R. *et al.* (2004) Chem. Biol. **11**:1009.
6. Miwa, H.E. *et al.* (2010) J. Biol. Chem. **285**:1208.
7. Wu, Z.L. *et al.* (2011) Glycobiology **21**:727.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956