

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
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

O-glycosylation is a ubiquitous post-translational modification of secreted and membrane-bound proteins. Polypeptide N-acetylgalactosaminyltransferases (GALNTs) catalyze 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).

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