# GALNT2 Antibody / Polypeptide N-acetylgalactosaminyltransferase 2 (FY12958)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY12958 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

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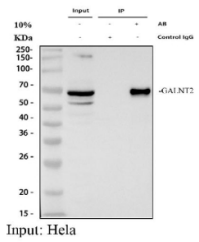
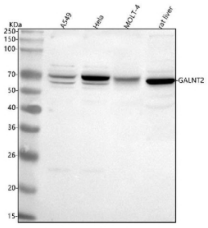
|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human, Rat |
| **Format** | Lyophilized |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | Q10471 |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>Immunoprecipitation : 2-4ug/500ug of lysate<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This GALNT2 antibody is available for research use only. |




Immunoprecipitating (IP) GALNT2 in Hela whole cell lysate. Western blot analysis of GALNT2 using anti-GALNT2 antibody; Lane 1: Hela whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-GALNT2 antibody in Hela whole cell lysate; Lane 3: anti-GALNT2 antibody (2ug) + Hela whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-GALNT2 antibody at a dilution of 0.5 ug/ml and probed with a mouse anti-rabbit IgG-HRP secondary antibody. The signal is developed using ECL Plus Western Blotting Substrate. Western blot analysis of GALNT2 shows a ~65 kDa band that appears as a tight doublet in some samples, consistent with differential N-glycosylation and maturation states of this Golgi glycosyltransferase.




Western blot analysis of GALNT2 using anti-GALNT2 antibody. Lane 1: human whole cell lysates, Lane 2: human Hela whole cell lysates, Lane 3: human MOLT-4 whole cell lysates, Lane 4: rat liver tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GALNT2 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. Western blot analysis of GALNT2 shows a ~65 kDa band that appears as a tight doublet in some samples, consistent with differential N-glycosylation and maturation states of this Golgi glycosyltransferase.

## Description

GALNT2 antibody detects Polypeptide N-acetylgalactosaminyltransferase 2, an enzyme that initiates mucin-type O-linked glycosylation by transferring N-acetylgalactosamine (GalNAc) to serine and threonine residues of target proteins. The UniProt recommended name is Polypeptide N-acetylgalactosaminyltransferase 2 (GALNT2). This enzyme is localized in the Golgi apparatus and is part of a family of glycosyltransferases that regulate protein processing, secretion, and cell signaling.

Functionally, GALNT2 antibody identifies a 571-amino-acid type II transmembrane protein with an N-terminal cytoplasmic tail, a single transmembrane helix, and a luminal catalytic domain. GALNT2 controls the first step of O-glycan biosynthesis, generating the Tn antigen precursor used for complex glycan assembly. Its substrate selectivity contributes to tissue-specific glycosylation patterns that affect protein stability, receptor signaling, and extracellular matrix composition. Through this activity, GALNT2 regulates cellular adhesion, immune recognition, and lipid metabolism.

The GALNT2 gene is located on chromosome 1q42.13 and is broadly expressed in liver, pancreas, intestine, and epithelial tissues. Genetic studies link GALNT2 variants to plasma lipid levels and susceptibility to metabolic disorders. Reduced GALNT2 expression impairs O-glycosylation of apolipoprotein C-III (ApoC3) and ANGPTL3, leading to altered triglyceride metabolism. Conversely, overexpression influences cell surface receptor function and proteolytic shedding of glycoproteins involved in inflammation and cancer progression.

In cellular signaling, GALNT2 participates in the regulation of the epidermal growth factor receptor (EGFR) and insulin receptor pathways. Aberrant O-glycosylation mediated by GALNT2 modifies receptor trafficking and ligand responsiveness. In cancer, dysregulated GALNT2 expression is associated with increased proliferation, migration, and metastasis in hepatocellular carcinoma and breast cancer. Conversely, its reduced expression can impair glycan-mediated cell communication and immune regulation.

GALNT2 antibody is used for immunohistochemistry, western blotting, and glycoproteomics studies to assess Golgi function, protein maturation, and post-translational modification patterns. The enzyme's activity is crucial for mucin biosynthesis, glycoprotein secretion, and metabolic balance. In metabolic research, GALNT2 serves as a biomarker linking glycosylation to lipid homeostasis and cardiovascular disease risk.

Structurally, GALNT2 contains a catalytic Gal/GalNAc-T motif and a C-terminal ricin-like lectin domain that determines substrate specificity. These features allow recognition of unmodified peptide regions and extension of O-linked glycans in a sequential manner. NSJ Bioreagents provides GALNT2 antibody reagents validated for use in glycosylation, metabolism, and oncology research to examine protein modification and trafficking mechanisms.

## Application Notes

Optimal dilution of the GALNT2 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human GALNT2 recombinant protein (Position: H442-Q571) was used as the immunogen for the GALNT2 antibody.

## Storage

After reconstitution, the GALNT2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.