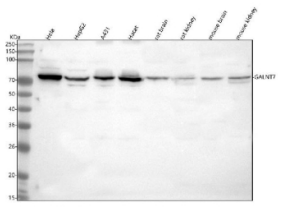
GALNT7 Antibody / Polypeptide N-acetylgalactosaminyltransferase 7 (FY12126)

Catalog No.	Formulation	Size
FY12126	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, 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	Q86SF2
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This GALNT7 antibody is available for research use only.



Western blot analysis of GALNT7 using anti-GALNT7 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human whole cell lysates, Lane 4: human Hacat whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat kidney tissue lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse kidney 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-GALNT7 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. A specific band was detected for GALNT7 at approximately 75 kDa. The expected band size for GALNT7 is at 75 kDa.

Description

GALNT7 antibody detects Polypeptide N-acetylgalactosaminyltransferase 7, encoded by the GALNT7 gene on

chromosome 4q31.1. GALNT7 antibody recognizes this glycosyltransferase, which belongs to the family of enzymes that initiate mucin-type O-linked glycosylation. GALNT7 transfers N-acetylgalactosamine (GalNAc) from UDP-GalNAc to serine or threonine residues in polypeptides, producing the Tn antigen and triggering formation of more complex O-glycan structures. This initial step in O-glycosylation regulates stability, solubility, localization, and function of diverse secreted and membrane proteins.

Structurally, GALNT7 contains a conserved catalytic glycosyltransferase domain with motifs required for UDP-sugar binding and catalysis. Its C-terminal ricin B-type lectin domain recognizes GalNAc-containing glycans, enhancing substrate specificity by targeting partially glycosylated peptides. This dual-domain organization ensures GALNT7 selectively modifies glycoproteins in the Golgi apparatus. Differential expression across tissues enables cell type-specific glycosylation signatures that influence developmental and immune processes.

Functionally, GALNT7 participates in modifying mucins, adhesion molecules, and receptors that mediate signaling and cellular interactions. Aberrant GALNT7 activity alters glycosylation, impacting tumor progression and immune recognition. In cervical, breast, and prostate cancers, GALNT7 is overexpressed, producing truncated glycans and exposing Tn antigens that promote metastasis and immune evasion. Conversely, loss of GALNT7 disrupts epithelial integrity and reduces protective mucin barriers. Regulation of GALNT7 by microRNAs and transcriptional programs further links it to cancer biology and development.

Beyond cancer, GALNT7 is implicated in immune modulation. It modifies receptors involved in lymphocyte activation and adhesion molecules guiding leukocyte trafficking. Dysregulated O-glycosylation by GALNT7 can impair immune tolerance, alter antigen presentation, and contribute to inflammatory conditions. Developmentally, GALNT7 expression is enriched in epithelial tissues and during organogenesis, suggesting roles in morphogenesis and cell differentiation. Researchers rely on GALNT7 antibody to evaluate enzyme expression in contexts ranging from tumor progression to immune regulation.

In experimental research, GALNT7 antibody is used in western blotting to quantify protein levels, immunofluorescence to assess Golgi localization, and immunohistochemistry to map expression in tumors. Co-immunoprecipitation studies combined with glycoproteomics reveal GALNT7 substrates including MUC1, integrins, and growth factor receptors. By enabling detection of this enzyme, GALNT7 antibody supports functional analyses of O-glycosylation pathways. NSJ Bioreagents provides GALNT7 antibody for reliable use in glycobiology, oncology, and immunology research.

Application Notes

Optimal dilution of the GALNT7 antibody should be determined by the researcher.

Immunogen

E.coli-derived human GALNT7 recombinant protein (Position: K67-V657) was used as the immunogen for the GALNT7 antibody.

Storage

After reconstitution, the GALNT7 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.