

# GalNAc-T6 (Y5J): sc-100755

## BACKGROUND

The UDP-N-acetyl- $\alpha$ -D-galactosamine:polypeptide N-acetylgalactosaminyl-transferase (GalNAc-T) family of enzymes are substrate-specific proteins that catalyze the transfer of GalNAc (N-acetylgalactosaminyl) to serine and threonine residues onto various proteins, thereby initiating mucin-type O-linked glycosylation in the Golgi apparatus. GalNAc-T6, also known as GALNT6 (polypeptide N-acetylgalactosaminyltransferase 6), is a 622 amino acid single-pass type II membrane protein that localizes to the Golgi and, like other GalNAc proteins, contains a stem region and a C-terminal ricin/lectin-like domain. Highly expressed in trachea, fibroblasts and placenta with lower expression in brain and pancreas, GalNAc-T6 catalyzes the first reaction in O-linked oligosaccharide biosynthesis, namely the transfer of an N-acetyl-D-galactosamine residue to a protein acceptor. GalNAc-T6 uses calcium and manganese as cofactors and is thought to participate in the synthesis of oncofetal Fibronectin. Additionally, GalNAc-T6 may serve as a potential marker for breast cancer.

## CHROMOSOMAL LOCATION

Genetic locus: GALNT6 (human) mapping to 12q13.13; Galnt6 (mouse) mapping to 15 F1.

## SOURCE

GalNAc-T6 (Y5J) is a mouse monoclonal antibody raised against recombinant GalNAc-T6 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

GalNAc-T6 (Y5J) is recommended for detection of GalNAc-T6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GalNAc-T6 siRNA (h): sc-75100, GalNAc-T6 siRNA (m): sc-75101, GalNAc-T6 shRNA Plasmid (h): sc-75100-SH, GalNAc-T6 shRNA Plasmid (m): sc-75101-SH, GalNAc-T6 shRNA (h) Lentiviral Particles: sc-75100-V and GalNAc-T6 shRNA (m) Lentiviral Particles: sc-75101-V.

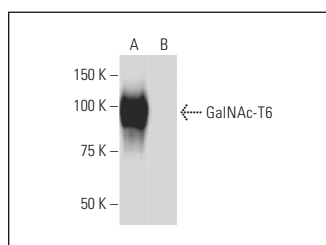
Molecular Weight of GalNAc-T6: 71 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or human GalNAc-T6 transfected 293T whole cell lysate.

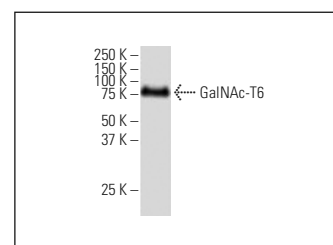
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



GalNAc-T6 (Y5J): sc-100755 Western blot analysis of GalNAc-T6 expression in human GalNAc-T6 transfected (A) and non-transfected (B) 293T whole cell lysates.



GalNAc-T6 (Y5J): sc-100755, Western blot analysis of GalNAc-T6 expression in A-431 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Song, J., et al. 2020. GALNT6 promotes invasion and metastasis of human lung adenocarcinoma cells through O-glycosylating chaperone protein GRP78. *Cell Death Dis.* 11: 352.
2. Reis, J.S.D., et al. 2023. Increased expression of the pathological O-glycosylated form of oncofetal fibronectin in the multidrug resistance phenotype of cancer cells. *Matrix Biol.* 118: 47-68.
3. Ding, M., et al. 2023. Knocking down GALNT6 promotes pyroptosis of pancreatic ductal adenocarcinoma cells through NF $\kappa$ B/NLRP3/GSDMD and GSDME signaling pathway. *Front. Oncol.* 13: 1097772.
4. Deng, B., et al. 2024. CCDC88C, an O-GalNAc glycosylation substrate of GALNT6, drives breast cancer metastasis by promoting c-JUN-mediated CEMIP transcription. *Cancer Cell Int.* 24: 237.
5. Sun, L., et al. 2024. N-acetylgalactosaminyltransferase GALNT6 is a potential therapeutic target of clear cell renal cell carcinoma progression. *Cancer Sci.* 115: 3320-3332.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.