

GalNAc-T14 (A-8): sc-393051

BACKGROUND

The UDP-N-acetyl- α -D-galactosamine: polypeptide N-acetylgalactosaminyltransferase (GalNAc-T) family of enzymes are substrate-specific proteins that catalyze the transfer of GalNAc (N-acetylgalactosaminyl) to serine and threonine residues on various proteins, thereby initiating mucin-type O-linked glycosylation in the Golgi apparatus. GalNAc-T14 (UDP-N-acetyl- α -D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 14) is a 552 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus and contains one Ricin B-type lectin domain. Existing as multiple alternatively spliced isoforms that are highly expressed in fetal and adult kidney, GalNAc-T14 uses calcium and manganese as cofactors to catalyze the initial reaction in O-linked oligosaccharide biosynthesis, namely the transfer of GalNAc to select residues to target proteins.

CHROMOSOMAL LOCATION

Genetic locus: GALNT14 (human) mapping to 2p23.1.

SOURCE

GalNAc-T14 (A-8) is a mouse monoclonal antibody raised against amino acids 411-552 mapping at the C-terminus of GalNAc-T14 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GalNAc-T14 (A-8) is available conjugated to agarose (sc-393051 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393051 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393051 PE), fluorescein (sc-393051 FITC), Alexa Fluor® 488 (sc-393051 AF488), Alexa Fluor® 546 (sc-393051 AF546), Alexa Fluor® 594 (sc-393051 AF594) or Alexa Fluor® 647 (sc-393051 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393051 AF680) or Alexa Fluor® 790 (sc-393051 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GalNAc-T14 (A-8) is recommended for detection of GalNAc-T14 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GalNAc-T14 siRNA (h): sc-75092, GalNAc-T14 shRNA Plasmid (h): sc-75092-SH and GalNAc-T14 shRNA (h) Lentiviral Particles: sc-75092-V.

Molecular Weight (predicted) of GalNAc-T14: 64 kDa.

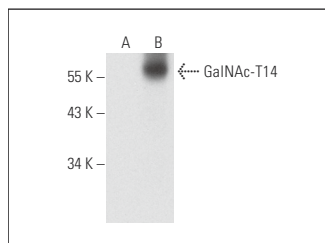
Molecular Weight (observed) of GalNAc-T14: 50 kDa.

Positive Controls: GalNAc-T14 (h): 293T Lysate: sc-111179.

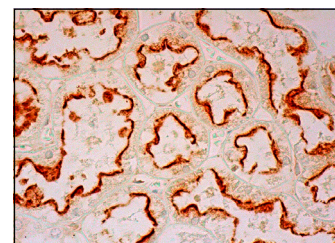
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



GalNAc-T14 (A-8): sc-393051. Western blot analysis of GalNAc-T14 expression in non-transfected: sc-117752 (A) and human GalNAc-T14 transfected: sc-111179 (B) 293T whole cell lysates.



GalNAc-T14 (A-8): sc-393051. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing apical membrane staining of cells in tubules.

SELECT PRODUCT CITATIONS

- Huanna, T., et al. 2015. GALNT14 mediates tumor invasion and migration in breast cancer cell MCF-7. *Mol. Carcinog.* 54: 1159-1171.
- Lin, N.C., et al. 2022. Association of rs9679162 genetic polymorphism and aberrant expression of polypeptide N-acetylgalactosaminyltransferase 14 (GALNT14) in head and neck cancer. *Cancers* 14: 4217.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.