

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

BACKGROUND

The UDP-N-acetyl-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.

REFERENCES

1. Elhammer, A.P., et al. 1999. The acceptor specificity of UDP-GalNAc: polypeptide N-acetylgalactosaminyltransferases. *Glycoconj. J.* 16: 171-180.
2. Wang, H., et al. 2003. Cloning and characterization of a novel UDP-GalNAc: polypeptide N-acetylgalactosaminyltransferase, pp-GalNAc-T14. *Biochem. Biophys. Res. Commun.* 300: 738-744.
3. Ten Hagen, K.G., et al. 2003. All in the family: the UDP-GalNAc: polypeptide N-acetylgalactosaminyltransferases. *Glycobiology* 13: 1R-16R.
4. Wu, C., et al. 2007. N-Acetylgalactosaminyltransferase 14, a novel Insulin-like growth factor binding protein-3 binding partner. *Biochem. Biophys. Res. Commun.* 357: 360-365.
5. Wagner, K.W., et al. 2007. Death-receptor O-glycosylation controls tumor-cell sensitivity to the proapoptotic ligand Apo2L/TRAIL. *Nat. Med.* 13: 1070-1077.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 608225. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

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

PRODUCT

GalNAc-T14 (h): 293T Lysate represents a lysate of human GalNAc-T14 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

GalNAc-T14 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive GalNAc-T14 antibodies. Recommended use: 10-20 μ l per lane.

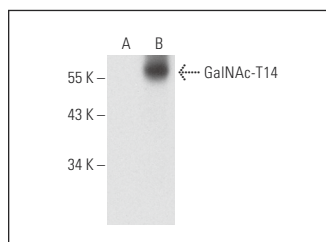
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GalNAc-T14 (A-8): sc-393051 is recommended as a positive control antibody for Western Blot analysis of enhanced human GalNAc-T14 expression in GalNAc-T14 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

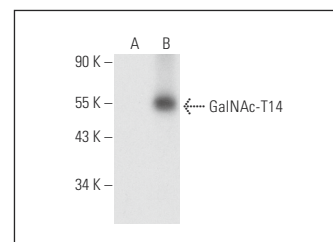
RECOMMENDED SUPPORT REAGENTS

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.

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 (C-5): sc-393056. 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.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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.