

GalNAc-T14 (K-15): sc-68508

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.

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.

CHROMOSOMAL LOCATION

Genetic locus: GALNT14 (human) mapping to 2p23.1; Galnt14 (mouse) mapping to 17 E2.

SOURCE

GalNAc-T14 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GalNAc-T14 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68508 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

GalNAc-T14 (K-15) is recommended for detection of GalNAc-T14 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GalNAc-T14 (K-15) is also recommended for detection of GalNAc-T14 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GalNAc-T14 siRNA (h): sc-75092, GalNAc-T14 siRNA (m): sc-75093, GalNAc-T14 shRNA Plasmid (h): sc-75092-SH, GalNAc-T14 shRNA Plasmid (m): sc-75093-SH, GalNAc-T14 shRNA (h) Lentiviral Particles: sc-75092-V and GalNAc-T14 shRNA (m) Lentiviral Particles: sc-75093-V.

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

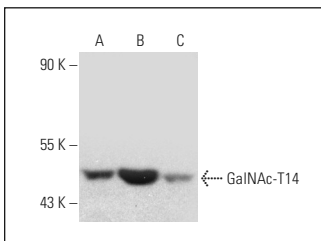
Molecular Weight (observed) of GalNAc-T14: 50 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, HeLa whole cell lysate: sc-2200 and Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GalNAc-T14 (K-15): sc-68508. Western blot analysis of GalNAc-T14 expression in HeLa (A), Caki-1 (B) and Jurkat (C) whole cell lysates.

RESEARCH USE

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