

GalNAc-T11 (S-20): sc-68500

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 of various proteins, thereby initiating mucin-type O-linked glycosylation in the Golgi apparatus. GalNAc-T11 (polypeptide N-acetylgalactosaminyltransferase 11), also known as UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase 11, is a 608 amino acid protein that catalyzes glycosylation of Muc1, Muc4.1 and EA2, though it does not display enzymatic preference for erythropoietin. The N-terminal domain is involved in substrate binding and manganese coordination, while the C-terminal domain is involved in UDP-Gal binding and catalytic reaction. GalNAc-T11 is highly expressed in kidney tubules, though it is not expressed in glomeruli. There are two isoforms of GalNAc-T11 that are produced as a result of alternative splicing events.

REFERENCES

- Elhammer, A.P., et al. 1993. The specificity of UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase as inferred from a database of *in vivo* substrates and from the *in vitro* glycosylation of proteins and peptides. *J. Biol. Chem.* 268: 10029-10038.
- Elhammer, A.P., et al. 1999. The acceptor specificity of UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferases. *Glycoconj. J.* 16: 171-180.
- Irimura, T., et al. 1999. Diverse glycosylation of Muc1 and Muc2: potential significance in tumor immunity. *J. Biochem.* 126: 975-985.
- Schwientek, T., et al. 2002. Functional conservation of subfamilies of putative UDP-N-acetylgalactosamine:polypeptide N-acetylgalactosaminyltransferases in *Drosophila*, *Caenorhabditis elegans*, and mammals. One subfamily composed of I(2)35Aa is essential in *Drosophila*. *J. Biol. Chem.* 277: 22623-22638.

CHROMOSOMAL LOCATION

Genetic locus: GALNT11 (human) mapping to 7q36.1; Galnt11 (mouse) mapping to 5 A3.

SOURCE

GalNAc-T11 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GalNAc-T11 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-68500 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-T11 (S-20) is recommended for detection of GalNAc-T11 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), 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).

GalNAc-T11 (S-20) is also recommended for detection of GalNAc-T11 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GalNAc-T11 siRNA (h): sc-75086, GalNAc-T11 siRNA (m): sc-75087, GalNAc-T11 shRNA Plasmid (h): sc-75086-SH, GalNAc-T11 shRNA Plasmid (m): sc-75087-SH, GalNAc-T11 shRNA (h) Lentiviral Particles: sc-75086-V and GalNAc-T11 shRNA (m) Lentiviral Particles: sc-75087-V.

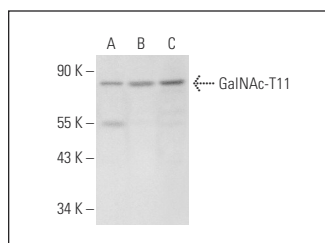
Molecular Weight of GalNAc-T11: 69 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

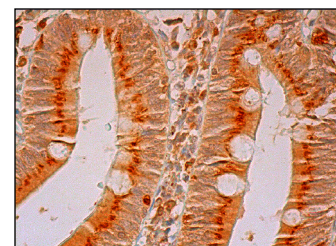
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



GalNAc-T11 (S-20): sc-68500. Western blot analysis of GalNAc-T11 expression in HEK293 (A), HeLa (B) and K-562 (C) whole cell lysates.



GalNAc-T11 (S-20): sc-68500. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

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