SANTA CRUZ BIOTECHNOLOGY, INC.

GLT25D2 (T-12): sc-160378

BACKGROUND

GLT25D2 (glycosyltransferase 25 domain containing 2), also known as procollagen galactosyltransferase 2 or hydroxylysine galactosyltransferase 2, is a 626 amino acid protein that localizes to endoplasmic reticulum lumen and belongs to the glycosyltransferase 25 family. Possessing β-galactosyltransferase activity, GLT25D2 transports β-galactose to hydroxylysine residues on collagen but lacks glucosyltransferase activity. GLT25D2 is expressed in skeletal muscle and brain, and is encoded by a gene located on human chromosome 1q25.3, a region associated with the hereditary prostate cancer (HPC1) locus. Human chromosome 1 spans 260 million base pairs, contains over 3,000 genes, comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

1. Eudy, J.D., Weston, M.D., Yao, S., Hoover, D.M., Rehm, H.L., Ma-Edmonds, M., Yan, D., Ahmad, I., Cheng, J.J., Ayuso, C., Cremers, C., Davenport, S., Moller, C., Talmadge, C.B., Beisel, K.W., Tamayo, M., Morton, C.C., Swaroop, A., Kimberling and W.J., Sumegi, J. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. Science 280: 1753-1757.
2. Sood, R., Bonner, T.I., Makalowska, I., Stephan, D.A., Robbins, C.M., Connors, T.D., Morgenbesser, S.D., Su, K., Faruque, M.U., Pinkett, H., Graham, C., Baxevanis, A.D., Klinger, K.W., Landes, G.M., Trent and J.M., Carpten, J.D. 2001. Cloning and characterization of 13 novel transcripts and the human RGS8 gene from the 1q25 region encompassing the hereditary prostate cancer (HPC1) locus. Genomics 73: 211-222.
3. Tayebi, N., Callahan, M., Madike, V., Stubblefield, B.K., Orvisky, E., Krasnewich, D., Fillano and J.J., Sidransky, E. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.
4. Plasilova, M., Russell, A.M., Wanner, A., Wolf, A., Dobbie, Z., Müller and H.J., Heinimann, K. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. Eur. J. Hum. Genet. 12: 365-371.
5. Betarbet, R., Anderson, L.R., Gearing, M., Hodges, T.R., Fritz, J.J., Lah and J.J., Levey, A.I. 2008. Fas-associated factor 1 and Parkinson's disease. Neurobiol. Dis. 31: 309-315.
6. Yurov, Y.B., Iourov, I.Y., Vorsanova, S.G., Demidova, I.A., Kravetz, V.S., Beresheva, A.K., Kolotii, A.D., Monakchov, V.V., Uranova, N.A., Vostrikov, V.M., Soloviev and I.V., Liehr, T. 2008. The schizophrenia brain exhibits low-level aneuploidy involving chromosome 1. Schizophr. Res. 98: 139-147.
7. Yokoi, T., Koide, R., Matsuoka, K., Nakagawa and A., Azuma, N. 2009. Analysis of the vitreous membrane in a case of type 1 Stickler syndrome. Graefes Arch. Clin. Exp. Ophthalmol. 247: 715-718.
8. Schegg, B., Hülsmeier, A.J., Rutschmann, C., Maag and C., Hennet, T. 2009. Core glycosylation of collagen is initiated by two β(1-O)galactosyltransferases. Mol. Cell. Biol. 29: 943-952.

CHROMOSOMAL LOCATION

Genetic locus: GLT25D2 (human) mapping to 1q25.3; Glt25d2 (mouse) mapping to 1 G3.

SOURCE

GLT25D2 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GLT25D2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-160378 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GLT25D2 (T-12) is recommended for detection of GLT25D2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with GLT25D1 .

Suitable for use as control antibody for GLT25D2 siRNA (h): sc-78633, GLT25D2 siRNA (m): sc-145434, GLT25D2 shRNA Plasmid (h): sc-78633-SH, GLT25D2 shRNA Plasmid (m): sc-145434-SH, GLT25D2 shRNA (h) Lentiviral Particles: sc-78633-V and GLT25D2 shRNA (m) Lentiviral Particles: sc-145434-V.

Molecular Weight of GLT25D2: 73 kDa.

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) 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.

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 or our catalog for detailed protocols and support products.