

TYSND1 (M-16): sc-107116

BACKGROUND

TYSND1 (trypsin domain containing 1), a member of the peptidase S1B family, is a 566 amino acid protein that is synthesized in the cytosol and is localized to the peroxisome where it exists as two proteolytically cleaved peptides. Functioning as a peroxisomal protease, YYSND1 participates in controlling the peroxisomal β -oxidation of fatty acids and also mediates both the removal of the leader peptide from proteins containing a PTS2 target sequence and the specific processing of PTS1 proteins. The gene encoding YYSND1 maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

1. Subramani, S. 1996. Convergence of model systems for peroxisome biogenesis. *Curr. Opin. Cell Biol.* 8: 513-518.
2. Alimova-Kost, M.V., Imreh, S., Buchman, V.L. and Ninkina, N.N. 1998. Assignment 1 of phosphotriesterase-related gene (PTER) to human chromosome band 10p12 by *in situ* hybridization. *Cytogenet. Cell Genet.* 83: 16-17.
3. Berger, P., Young, P. and Suter, U. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. *Neurogenetics* 4: 1-15.
4. Nonneman, D. and Rohrer, G.A. 2004. Comparative mapping of human chromosome 10 to pig chromosomes 10 and 14. *Anim. Genet.* 35: 338-343.
5. Kurochkin, I.V., Nagashima, T., Konagaya, A. and Schönbach, C. 2005. Sequence-based discovery of the human and rodent peroxisomal proteome. *Appl. Bioinformatics* 4: 93-104.
6. Kurochkin, I.V., Mizuno, Y., Konagaya, A., Sakaki, Y., Schönbach, C. and Okazaki, Y. 2007. Novel peroxisomal protease Tysnd1 processes PTS1- and PTS2-containing enzymes involved in β -oxidation of fatty acids. *EMBO J.* 26: 835-845.
7. Online Mendelian Inheritance in Man, OMIM[™]. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611017. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Tysnd1 (mouse) mapping to 10 B4.

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.

SOURCE

TYSND1 (M-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of YYSND1 of mouse 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-107116 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TYSND1 (M-16) is recommended for detection of YYSND1 of mouse and rat 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).

TYSND1 (M-16) is also recommended for detection of YYSND1 in additional species, including equine.

Suitable for use as control antibody for YYSND1 siRNA (m): sc-154828, YYSND1 shRNA Plasmid (m): sc-154828-SH and YYSND1 shRNA (m) Lentiviral Particles: sc-154828-V.

Molecular Weight of full length YYSND1: 59 kDa.

Molecular Weight of processed YYSND1: 49 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.