SANTA CRUZ BIOTECHNOLOGY, INC.

DTWD1 (N-17): sc-240333

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The Power to Question

BACKGROUND

DTWD1 (DTW domain-containing protein 1), also known as MDS009, is a 304 amino acid protein that contains one DXTW motif and belongs to the DTW family. Existing as three alternatively spliced isoforms, DTWD1 is encoded by a gene that maps to human chromosome 15q21.2. Chromosome 15 is made up of approximately 106 million base pairs and is about 3% of the human genome. Angelman and Prader-Willi syndromes are associated with loss of function or deletion of genes in the 15q11-q13 region. In the case of Angelman syndrome, this loss is due to inactivity of the maternal 15q11-q13 encoded UBE3A gene in the brain by either chromosomal deletion or mutation. In cases of Prader-Willi syndrome, there is a partial or complete deletion of this region from the paternal copy of chromosome 15. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is associated with chromosome 15 through the FBN1 gene.

REFERENCES

1. Cachón-González, M.B., et al. 2006. Effective gene therapy in an authentic model of Tay-Sachs-related diseases. Proc. Natl. Acad. Sci. USA 103: 10373-10378.
2. Zody, M.C., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. Nature 440: 671-675.
3. Diene, G., et al. 2007. The Prader-Willi syndrome. Ann. Endocrinol. 68: 129-137.
4. Lalande, M., et al. 2007. Molecular epigenetics of Angelman syndrome. Cell. Mol. Life Sci. 64: 947-960.
5. Maegawa, G.H., et al. 2007. Pyrimethamine as a potential pharmacological chaperone for late-onset forms of GM2 gangliosidosis. J. Biol. Chem. 282: 9150-9161.
6. Makoff, A.J., et al. 2007. Detailed analysis of 15q11-q14 sequence corrects errors and gaps in the public access sequence to fully reveal large segmental duplications at breakpoints for Prader-Willi, Angelman, and inv dup(15) syndromes. Genome Biol. 8: R114
7. Ramirez, F., et al. 2007. Fibrillin-rich microfibrils: Structural determinants of morphogenetic and homeostatic events. J. Cell. Physiol. 213: 326-330.

CHROMOSOMAL LOCATION

Genetic locus: DTWD1 (human) mapping to 15q21.2; Dtwd1 (mouse) mapping to 2 F1.

SOURCE

DTWD1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DTWD1 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-240333 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DTWD1 (N-17) is recommended for detection of DTWD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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); non cross-reactive with DTWD2.

DTWD1 (N-17) is also recommended for detection of DTWD1 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for DTWD1 siRNA (h): sc-89974, DTWD1 siRNA (m): sc-143181, DTWD1 shRNA Plasmid (h): sc-89974-SH, DTWD1 shRNA Plasmid (m): sc-143181-SH, DTWD1 shRNA (h) Lentiviral Particles: sc-89974-V and DTWD1 shRNA (m) Lentiviral Particles: sc-143181-V.

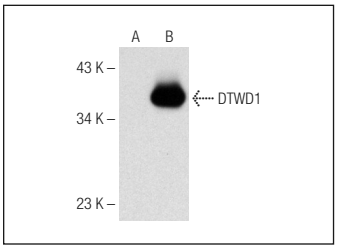
Molecular Weight of DTWD1 isoforms: 35/26/12 kDa.

Positive Controls: DTWD1 (m): 293T Lysate: sc-126744.

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



DTWD1 (N-17): sc-240333. Western blot analysis of DTWD1 expression in non-transfected: sc-117752 (**A**) and mouse DTWD1 transfected: sc-126744 (**B**) 293T whole cell lysates.

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.