SANTA CRUZ BIOTECHNOLOGY, INC.

DIS3L2 (6C7B2): sc-517218

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The exosome is a multisubunit complex composed of several highly conserved subunits, some of which are 3' to 5' exoribonucleases. The complex is involved in a variety of cellular processes and is responsible for degrading unstable mRNAs that contain AU-rich (ARE) elements in their untranslated 3' region. DIS3L2 (DIS3-like exonuclease 2) is an 885 amino acid protein that is thought to function as an exonuclease and may be required for the 3' processing of pre-mRNA into mature mRNA. Defects or chromosomal translocations involving the gene encoding DIS3L2 may be associated with Marfanoid habitus, a genetic disorder characterized by abnormalities in the skeleton, eyes and cardiovascular system. DIS3L2 is expressed as five isoforms due to alternative splicing events.

REFERENCES

1. Brouwer, R., et al. 2002. Autoantibodies directed to novel components of the PM/Scl complex, the human exosome. Arthritis Res. 4: 134-138.
2. Mukherjee, D., et al. 2002. The mammalian exosome mediates the efficient degradation of mRNAs that contain AU-rich elements. EMBO J. 21: 165-174.
3. Raijmakers, R., et al. 2002. Protein-protein interactions between human exosome components support the assembly of RNase PH-type subunits into a six-membered PNPase-like ring. J. Mol. Biol. 323: 653-663.
4. Raijmakers, R., et al. 2003. The association of the human PM/Scl-75 autoantigen with the exosome is dependent on a newly identified N terminus. J. Biol. Chem. 278: 30698-30704.
5. Schilders, G., et al. 2007. Caspase-mediated cleavage of the exosome subunit PM/Scl-75 during apoptosis. Arthritis Res. Ther. 9: R12.
6. van Dijk, E.L., et al. 2007. Human cell growth requires a functional cytoplasmic exosome, which is involved in various mRNA decay pathways. RNA 13: 1027-1035.
7. Bocciardi, R., et al. 2007. Overexpression of the C-type natriuretic peptide (CNP) is associated with overgrowth and bone anomalies in an individual with balanced t(2;7) translocation. Hum. Mutat. 28: 724-731.

CHROMOSOMAL LOCATION

Genetic locus: DIS3L2 (human) mapping to 2q37.1.

SOURCE

DIS3L2 (6C7B2) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 27-250 of DIS3L2 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

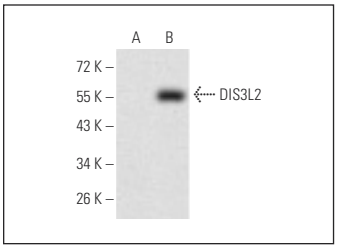
DIS3L2 (6C7B2) is recommended for detection of DIS3L2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DIS3L2 siRNA (h): sc-94849, DIS3L2 shRNA Plasmid (h): sc-94849-SH and DIS3L2 shRNA (h) Lentiviral Particles: sc-94849-V.

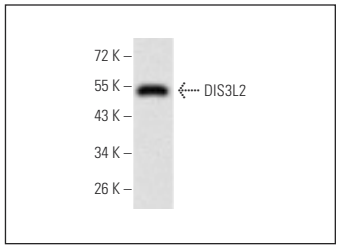
Molecular Weight of DIS3L2 isoforms: 99/69/67/27 kDa.

Positive Controls: human DIS3L2 (27-250)-hIgGFc transfected HEK293 whole cell lysate.

DATA



DIS3L2 (6C7B2): sc-517218. Western blot analysis of DIS3L2 expression in non-transfected (**A**) and human DIS3L2 (27-250)-hIgGFc transfected (**B**) HEK293 whole cell lysates.



DIS3L2 (6C7B2): sc-517218. Western blot analysis of DIS3L2 expression in human DIS3L2 recombinant protein.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.