

DIS3L (E-12): sc-398739

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. DIS3L (DIS3 mitotic control homolog (*S. cerevisiae*)-like) is a 1,054 amino acid exonuclease belonging to the ribonuclease II (RNB) family. Existing as three alternatively spliced isoforms, DIS3L may be required for the 3' processing of pre-mRNA into mature mRNA. DIS3L is encoded by a gene located on human chromosome 15, which houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

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.

CHROMOSOMAL LOCATION

Genetic locus: DIS3L (human) mapping to 15q22.31; Dis3l (mouse) mapping to 9 C.

SOURCE

DIS3L (E-12) is a mouse monoclonal antibody raised against amino acids 581-690 mapping within an internal region of DIS3L of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DIS3L (E-12) is available conjugated to agarose (sc-398739 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398739 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398739 PE), fluorescein (sc-398739 FITC), Alexa Fluor® 488 (sc-398739 AF488), Alexa Fluor® 546 (sc-398739 AF546), Alexa Fluor® 594 (sc-398739 AF594) or Alexa Fluor® 647 (sc-398739 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398739 AF680) or Alexa Fluor® 790 (sc-398739 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

DIS3L (E-12) is recommended for detection of DIS3L of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for DIS3L siRNA (h): sc-89907, DIS3L siRNA (m): sc-143046, DIS3L shRNA Plasmid (h): sc-89907-SH, DIS3L shRNA Plasmid (m): sc-143046-SH, DIS3L shRNA (h) Lentiviral Particles: sc-89907-V and DIS3L shRNA (m) Lentiviral Particles: sc-143046-V.

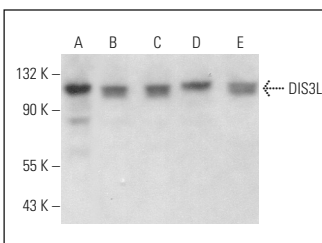
Molecular Weight of DIS3L: 121 kDa.

Positive Controls: T98G cell lysate: sc-2294, HeLa whole cell lysate: sc-2200 or SCC-4 whole cell lysate: sc-364363.

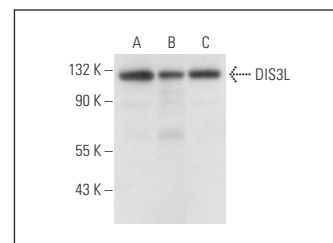
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



DIS3L (E-12): sc-398739. Western blot analysis of DIS3L expression in SCC-4 (A), SH-SY5Y (B), SK-N-SH (C), Caki-1 (D) and KNRK (E) whole cell lysates.



DIS3L (E-12): sc-398739. Western blot analysis of DIS3L expression in T98G (A), SCC-4 (B) and HeLa (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Shukla, S., et al. 2019. The RNase PARN controls the levels of specific miRNAs that contribute to p53 regulation. *Mol. Cell* 73: 1204-1216.e4.

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.