SANTA CRUZ BIOTECHNOLOGY, INC.

EXOSC10 (B-8): sc-374595

The Power to Question

BACKGROUND

The exosome is a multi-subunit complex composed of several highly conserved proteins, 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. EXOSC10, also known as PMSCL, PMSCL2, p2, p3, p4, RRP6, Rrp6p, PM-Scl, or PM/Scl-100, is an 885 amino acid protein that contains one HRDC domain and one 3'-5' enonuclease domain. Localized to both the cytoplasm and the nucleus, EXOSC10 is part of the post-splicing exosome complex and is involved in mRNA surveillance, mRNA nuclear export and nonsense-mediated decay of mRNAs containing premature stop codons. Antibodies against EXOSC10 have been found in patients with scleroderma and/or polymyositis (chronic diseases of the skin and muscle, respectively), suggesting that EXOSC10 may be involved in the pathogenesis of these diseases. Two isoforms of EXOSC10 exist due to alternative splicing events.

REFERENCES

1. Blüthner, M. and Bautz, F.A. 1992. Cloning and characterization of the cDNA coding for a polymyositis-scleroderma overlap syndrome-related nucleolar 100-kD protein. J. Exp. Med. 176: 973-980.
2. Brouwer, R., et al. 2001. The human exosome: an autoantigenic complex of exoribonucleases in myositis and scleroderma. Arthritis Res. 3: 102-106.
3. Brouwer, R., et al. 2002. Autoantibodies directed to novel components of the PM/Scl complex, the human exosome. Arthritis Res. 4: 134-138.

CHROMOSOMAL LOCATION

Genetic locus: EXOSC10 (human) mapping to 1p36.22; Exosc10 (mouse) mapping to 4 E2.

SOURCE

EXOSC10 (B-8) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of EXOSC10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-374595 X, 200 µg/0.1 ml.

EXOSC10 (B-8) is available conjugated to agarose (sc-374595 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374595 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374595 PE), fluorescein (sc-374595 FITC), Alexa Fluor® 488 (sc-374595 AF488), Alexa Fluor® 546 (sc-374595 AF546), Alexa Fluor® 594 (sc-374595 AF594) or Alexa Fluor® 647 (sc-374595 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374595 AF680) or Alexa Fluor® 790 (sc-374595 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

EXOSC10 (B-8) is recommended for detection of EXOSC10 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

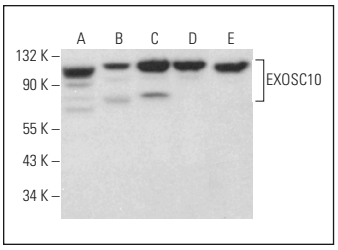
Suitable for use as control antibody for EXOSC10 siRNA (h): sc-88207, EXOSC10 siRNA (m): sc-105340, EXOSC10 shRNA Plasmid (h): sc-88207-SH, EXOSC10 shRNA Plasmid (m): sc-105340-SH, EXOSC10 shRNA (h) Lentiviral Particles: sc-88207-V and EXOSC10 shRNA (m) Lentiviral Particles: sc-105340-V.

EXOSC10 (B-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

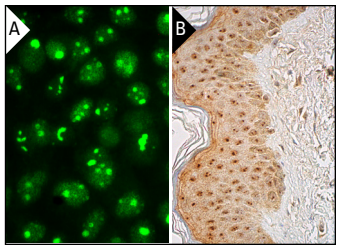
Molecular Weight of EXOSC10: 100 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, EOC 20 whole cell lysate: sc-364187 or WEHI-231 whole cell lysate: sc-2213.

DATA



EXOSC10 (B-8): sc-374595. Western blot analysis of EXOSC10 expression in K-562 (**A**), EOC 20 (**B**), WEHI-231 (**C**), F9 (**D**) and IMR-32 (**E**) whole cell lysates.



EXOSC10 (B-8): sc-374595. Immunofluorescence staining of formalin-fixed A-431 cells showing nucleolar and nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing nucleolar, nuclear and cytoplasmic staining of keratinocytes, Langerhans cells and melanocytes (**B**).

SELECT PRODUCT CITATIONS

1. Marin-Vicente, C., et al. 2015. RRP6/EXOSC10 is required for the repair of DNA double-strand breaks by homologous recombination. J. Cell Sci. 128: 1097-1107.
2. Rubio, K., et al. 2019. Inactivation of nuclear histone deacetylases by EP300 disrupts the MiCEE complex in idiopathic pulmonary fibrosis. Nat. Commun. 10: 2229.
3. Eaton, J.D., et al. 2020. A unified allosteric/torpedo mechanism for transcriptional termination on human protein-coding genes. Genes Dev. 34: 132-145.
4. Estell, C., et al. 2021. ZC3H4 restricts non-coding transcription in human cells. Elife 10: e67305.

RESEARCH USE

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