SANTA CRUZ BIOTECHNOLOGY, INC.

EXOSC9 (D-6): sc-271815

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. EXOSC9 (exosome component 9), also called p5, p6, PM/Scl-75 or RRP45, is a component of the exosome complex and is required for processing of 7S pre-RNA to mature 5.8S rRNA. Located in the nucleus and cytoplasm, EXOSC9 is a ribonuclease that is involved in mRNA degradation, but does not contribute to stability of the exosome complex. Unlike most of the exosome subunits, EXOSC9 is thought to act both independently and as a member of the exosome, thus making it an essential part of ARE-mediated mRNA decay. EXOSC9 is proteolytically cleaved during apoptosis and is implicated in certain autoimmune diseases such as myositis and scleroderma. Four isoforms of this protein exist 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.

CHROMOSOMAL LOCATION

Genetic locus: EXOSC9 (human) mapping to 4q27; Exosc9 (mouse) mapping to 3 B.

SOURCE

EXOSC9 (D-6) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of EXOSC9 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.

EXOSC9 (D-6) is available conjugated to agarose (sc-271815 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271815 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271815 PE), fluorescein (sc-271815 FITC), Alexa Fluor® 488 (sc-271815 AF488), Alexa Fluor® 546 (sc-271815 AF546), Alexa Fluor® 594 (sc-271815 AF594) or Alexa Fluor® 647 (sc-271815 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271815 AF680) or Alexa Fluor® 790 (sc-271815 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

EXOSC9 (D-6) is recommended for detection of EXOSC9 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 EXOSC9 siRNA (h): sc-88907, EXOSC9 siRNA (m): sc-144981, EXOSC9 shRNA Plasmid (h): sc-88907-SH, EXOSC9 shRNA Plasmid (m): sc-144981-SH, EXOSC9 shRNA (h) Lentiviral Particles: sc-88907-V and EXOSC9 shRNA (m) Lentiviral Particles: sc-144981-V.

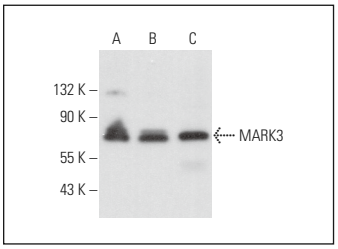
Molecular Weight of EXOSC9: 60 kDa.

Positive Controls: SP2/0 whole cell lysate: sc-364795, HeLa whole cell lysate: sc-2200 or SJRH30 cell lysate: sc-2287.

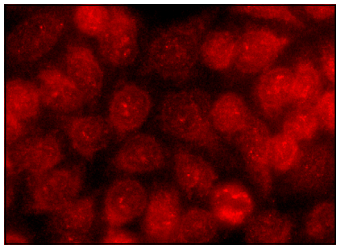
RECOMMENDED SUPPORT REAGENTS

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



EXOSC9 (D-6): sc-271815. Western blot analysis of EXOSC9 expression in HeLa (**A**), SJRH30 (**B**) and SP2/0 (**C**) whole cell lysates.



EXOSC9 (D-6): sc-271815. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Müller, J.S., et al. 2020. RNA exosome mutations in pontocerebellar hypoplasia alter ribosome biogenesis and p53 levels. Life Sci. Alliance 3: e202000678.
2. Quttina, M., et al. 2023. Exosc9 initiates SUMO-dependent lncRNA TERRA degradation to impact telomeric integrity in endocrine therapy insensitive hormone receptor-positive breast cancer. Cells 12: 2495.

RESEARCH USE

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