SANTA CRUZ BIOTECHNOLOGY, INC.

EXOSC9 (S-16): sc-162782

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The exosome is a multi-subunit 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

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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. Raijmakers, R., et al. 2004. PM-Scl-75 is the main autoantigen in patients with the polymyositis/scleroderma overlap syndrome. Arthritis Rheum. 50: 565-569.
6. Mahler, M., et al. 2005. Clinical evaluation of autoantibodies to a novel PM/Scl peptide antigen. Arthritis Res. Ther. 7: R704-R713.
7. Roh, S.G., et al. 2007. Identification of differentially expressed transcripts in bovine rumen and abomasum using a differential display method. J. Anim. Sci. 85: 395-403.
8. Schilders, G., et al. 2007. Caspase-mediated cleavage of the exosome subunit PM/Scl-75 during apoptosis. Arthritis Res. Ther. 9: R12.
9. 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.

CHROMOSOMAL LOCATION

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

SOURCE

EXOSC9 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EXOSC9 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-162782 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EXOSC9 (S-16) is recommended for detection of EXOSC9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 other EXOSC family members.

EXOSC9 (S-16) is also recommended for detection of EXOSC9 in additional species, including equine, canine, bovine and porcine.

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: HeLa whole cell lysate: sc-2200.

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) 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.

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.

PROTOCOLS

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