# EXOSC10 (N-14): sc-103489



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**

- Blüthner, M. and Bautz, F.A. 1992. Cloning and characterization of the cDNA coding for a polymyositis-scleroderma overlap syndrome-related nucleolar 100 kDa protein. J. Exp. Med. 176: 973-980.
- Brouwer, R., Pruijn, G.J. and van Venrooij, W.J. 2001. The human exosome: an autoantigenic complex of exoribonucleases in myositis and scleroderma. Arthritis Res. 3: 102-106.
- Brouwer, R., Vree Egberts, W.T., Hengstman, G.J., Raijmakers, R., van Engelen, B.G., Seelig, H.P., Renz, M., Mierau, R., Genth, E., Pruijn, G.J. and van Venrooij, W.J. 2002. Autoantibodies directed to novel components of the PM/Scl complex, the human exosome. Arthritis Res. 4: 134-138.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605960. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Selva-O'Callaghan, A., Mijares-Boeckh-Behrens, T., Labrador-Horrillos, M., Solans-Laque, R., Ma Grau-Junyent, J. and Vilardell-Tarres, M. 2003. Anti-PM-Scl antibodies in a patient with inclusion body myositis. Rheumatology 42: 1016-1018.
- Raijmakers, R., Renz, M., Wiemann, C., Egberts, W.V., Seelig, H.P., van Venrooij, W.J. and Pruijn, G.J. 2004. PM-ScI-75 is the main autoantigen in patients with the polymyositis/scleroderma overlap syndrome. Arthritis Rheum. 50: 565-569.

## **CHROMOSOMAL LOCATION**

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

# **SOURCE**

EXOSC10 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of EXOSC10 of human origin.

## **RESEARCH USE**

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

#### **PRODUCT**

Each vial contains 200  $\mu g$  IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103489 P, ( $100 \mu g$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

EXOSC10 (N-14) is recommended for detection of EXOSC10 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.

EXOSC10 (N-14) is also recommended for detection of EXOSC10 in additional species, including bovine.

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.

Molecular Weight of EXOSC10: 100 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## **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.

# **PROTOCOLS**

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



Try **EXOSC10 (B-8):** sc-374595, our highly recommended monoclonal alternative to EXOSC10 (N-14).

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