# EXOSC4 (C-16): sc-87108



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. EXOSC4 (exosome component 4), also known as SKI6, RRP41 or p12A, is a 245 amino acid protein that localizes to both the nucleus and the cytoplasm and shares 96% sequence identity with its mouse counterpart. Functioning as a component of the exosome complex, EXOSC4 exhibits 3'-5' exonuclease activity and is required for the 3'-processing of 7S pre-RNA to mature 5.8S rRNA. The gene encoding EXOSC4 maps to human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies.

## **REFERENCES**

- Allmang, C., Petfalski, E., Podtelejnikov, A., Mann, M., Tollervey, D. and Mitchell, P. 1999. The yeast exosome and human PM-Scl are related complexes of 3'→5' exonucleases. Genes Dev. 13: 2148-2158.
- Chen, C.Y., Gherzi, R., Ong, S.E., Chan, E.L., Raijmakers, R., Pruijn, G.J., Stoecklin, G., Moroni, C., Mann, M. and Karin, M. 2001. AU binding proteins recruit the exosome to degrade ARE-containing mRNAs. Cell 107: 451-464.
- Brouwer, R., Allmang, C., Raijmakers, R., van Aarssen, Y., Egberts, W.V., Petfalski, E., van Venrooij, W.J., Tollervey, D. and Pruijn, G.J. 2001. Three novel components of the human exosome. J. Biol. Chem. 276: 6177-6184.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606491. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Lejeune, F., Li, X. and Maquat, L.E. 2003. Nonsense-mediated mRNA decay in mammalian cells involves decapping, deadenylating, and exonucleolytic activities. Mol. Cell 12: 675-687.

### CHROMOSOMAL LOCATION

Genetic locus: EXOSC4 (human) mapping to 8q24.3; Exosc4 (mouse) mapping to 15 D3.

# **SOURCE**

EXOSC4 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of EXOSC4 of human origin.

## **PRODUCT**

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

Blocking peptide available for competition studies, sc-87108 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

# **STORAGE**

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

### **APPLICATIONS**

EXOSC4 (C-16) is recommended for detection of EXOSC4 of mouse and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other EXOSC family members.

EXOSC4 (C-16) is also recommended for detection of EXOSC4 in additional species, including equine and canine.

Suitable for use as control antibody for EXOSC4 siRNA (h): sc-77781, EXOSC4 siRNA (m): sc-144977, EXOSC4 shRNA Plasmid (h): sc-77781-SH, EXOSC4 shRNA Plasmid (m): sc-144977-SH, EXOSC4 shRNA (h) Lentiviral Particles: sc-77781-V and EXOSC4 shRNA (m) Lentiviral Particles: sc-144977-V.

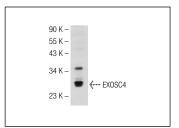
Molecular Weight of EXOSC4: 27 kDa.

Positive Controls: BJAB nuclear extract: sc-2145.

## **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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

# DATA



EXOSC4 (C-16): sc-87108. Western blot analysis of EXOSC4 expression in BJAB nuclear extract.

#### **RESEARCH USE**

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

MONOS Satisfation Guaranteed

Try **EXOSC4 (G-9):** sc-166772, our highly recommended monoclonal alternative to EXOSC4 (C-16).