SANTA CRUZ BIOTECHNOLOGY, INC.

EXOSC3 (Y-12): sc-107213

BACKGROUND

The exosome is a multisubunit complex of 3' to 5' exoribonucleases. It is involved in a variety of cellular processes and is responsible for degrading unstable mRNAs that contain AU-rich elements in their untranslated 3' region. EXOSC3 (exosome component 3), also known as p10, CGI-102, RRP40 (ribosomal RNA-processing protein 40), Rrp40p or hRrp40p, is a component of the exosome multienzyme ribonuclease complex. Localizing to the cytoplasm and nucleolus, EXOSC3 contains a putative S1 RNA-binding domain and is capable of binding RNA. EXOSC3 is a component of the top cap of the exosome and is essential for exosome stability. In addition, EXOSC3 is required for the processing of the 7S pre-RNA to the mature 5.8S rRNA.

REFERENCES

1. Allmang, C., et al. 1999. The yeast exosome and human PM-Scl are related complexes of 3' → 5' exonucleases. Genes Dev. 13: 2148-2158.
2. Brouwer, R., et al. 2001. Three novel components of the human exosome. J. Biol. Chem. 276: 6177-6184.
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. Brouwer, R., et al. 2002. Autoantibodies directed to novel components of the PM/Scl complex, the human exosome. Arthritis Res. 4: 134-138.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606489. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Shen, V., et al. 2006. A view to a kill: structure of the RNA exosome. Cell 127: 1093-1095.
7. Wang, H.W., et al. 2007. Architecture of the yeast Rrp44 exosome complex suggests routes of RNA recruitment for 3' end processing. Proc. Natl. Acad. Sci. USA 104: 16844-16849.
8. Lin, W.J., et al. 2007. Localization of AU-rich element-containing mRNA in cytoplasmic granules containing exosome subunits. J. Biol. Chem. 282: 19958-19968.
9. Qu, J.H., et al. 2007. Identification of genes upregulated by recombinant interferon-α in HepG2 cells by suppressive subtractive hybridization analysis. HBPD INT 6: 290-293.

CHROMOSOMAL LOCATION

Genetic locus: EXOSC3 (human) mapping to 9p13.2; Exosc3 (mouse) mapping to 4 B1.

SOURCE

EXOSC3 (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EXOSC3 of human origin.

STORAGE

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

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-107213 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EXOSC3 (Y-12) is recommended for detection of EXOSC3 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.

EXOSC3 (Y-12) is also recommended for detection of EXOSC3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for EXOSC3 siRNA (h): sc-92854, EXOSC3 siRNA (m): sc-144976, EXOSC3 shRNA Plasmid (h): sc-92854-SH, EXOSC3 shRNA Plasmid (m): sc-144976-SH, EXOSC3 shRNA (h) Lentiviral Particles: sc-92854-V and EXOSC3 shRNA (m) Lentiviral Particles: sc-144976-V.

Molecular Weight of EXOSC3: 31 kDa.

Positive Controls: HeLa nuclear extract: sc-2120 or 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.

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.