

EXOSC3 (m): 293T Lysate: sc-125317

BACKGROUND

The exosome is a multi-subunit 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-rRNA to the mature 5.8S rRNA.

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.
- 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.
- Raijmakers, R., Egberts, W.V., van Venrooij, W.J. and Pruijn, G.J. 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.
- 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.
- 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/>
- Shen, V. and Kiledjian, M. 2006. A view to a kill: structure of the RNA exosome. *Cell* 127: 1093-1095.
- Wang, H.W., Wang, J., Ding, F., Callahan, K., Bratkowski, M.A., Butler, J.S., Nogales, E. and Ke, A. 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.
- Lin, W.J., Duffy, A. and Chen, C.Y. 2007. Localization of AU-rich element-containing mRNA in cytoplasmic granules containing exosome subunits. *J. Biol. Chem.* 282: 19958-19968.
- Qu, J.H., Cheng, J., Zhang, L.X., Zhang, L.Y., Zhong, Y.W., Liu, Y., Wang, L., Dai, J.Z. and Xu, D.P. 2007. Identification of genes upregulated by recombinant interferon- α in Hep G2 cells by suppressive subtractive hybridization analysis. *HBPD INT* 6: 290-293.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

CHROMOSOMAL LOCATION

Genetic locus: Exosc3 (mouse) mapping to 4 B1.

PRODUCT

EXOSC3 (m): 293T Lysate represents a lysate of mouse EXOSC3 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

EXOSC3 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive EXOSC3 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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