



Rrp6 (yT-20): sc-26805

BACKGROUND

Nuclear mRNA metabolism relies on the interplay between transcription, processing, and nuclear export. RNA polymerase II transcripts experience major rearrangements within the nucleus, which include alterations in the structure of the mRNA precursors as well as the addition and perhaps even removal of proteins prior to transport across the nuclear membrane. Such mRNP-remodeling steps are thought to require the activity of RNA helicases/ATPases. Sub2, through its interaction with Yra1, is required for nuclear mRNA export. Stable mRNP formation and export require cotranscriptional recruitment of the mRNA export factors Yra1 and Sub2 by Hpr1. In yeast, Rrp6 (for ribosomal RNA processing) exonuclease participates in late events in 5.8 S rRNA (ribosomal RNA) processing. 3' processing of snoRNAs (small nucleolar RNAs) that are excised from polycistronic precursors or from mRNA introns is also a multi-step process that involves the exosome, with final trimming specifically dependent on the Rrp6p component. The exosome is a protein complex consisting of a variety of 3'-to-5' exonucleases that functions both in 3'-to-5' trimming of rRNA precursors and in 3'-to-5' degradation of mRNA. The nuclear-specific RNA exosome component Rrp6p, has been implicated in the retention of mRNAs at transcription sites and in 5.8 S rRNA 3' end formation.

REFERENCES

1. Briggs, M.W., Burkard, K.T., and Butler, J.S. 1998. Rrp6p, the yeast homologue of the human PM-Scl 100-kDa autoantigen, is essential for efficient 5.8 S rRNA 3' end formation. *J. Biol. Chem.* 273: 13255-13263.
2. Allmang, C., Kufel, J., Chanfreau, G., Mitchell, P., Petfalski, E., and Tollervey, D. 1999. Functions of the exosome in rRNA, snoRNA and snRNA synthesis. *EMBO J.* 18: 5399-5410.
3. Fomproix, N. and Hernandez-Verdun, D. 1999. Effects of anti-PM-Scl 100 (Rrp6p exonuclease) antibodies on prenucleolar body dynamics at the end of mitosis. *Exp. Cell Res.* 251: 452-464.
4. Jensen, T.H., Boulay, J., Rosbash, M., and Libri, D. 2001. The DECD box putative ATPase Sub2p is an early mRNA export factor. *Curr. Biol.* 11: 1711-1715.
5. Strasser, K. and Hurt, E. 2001. Splicing factor Sub2p is required for nuclear mRNA export through its interaction with Yra1p. *Nature* 413: 648-652.
6. Zenklusen, D., Vinciguerra, P., Wyss, J.C., and Stutz, F. 2002. Stable mRNP formation and export require cotranscriptional recruitment of the mRNA export factors Yra1p and Sub2p by Hpr1p. *Mol. Cell. Biol.* 22: 8241-8253.
7. Torchet, C., Bousquet-Antonelli, C., Milligan, L., Thompson, E., Kufel, J., and Tollervey, D. 2002. Processing of 3'-extended read-through transcripts by the exosome can generate functional mRNAs. *Mol. Cell.* 9: 1285-1296.

SOURCE

Rrp6 (yT-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Rrp6 of *Saccharomyces cerevisiae* origin.

RESEARCH USE

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

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-26805 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rrp6 (yT-20) is recommended for detection of Rrp6 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

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.