



## Rpb11 (4Y11): sc-58005

### BACKGROUND

Organisms respond to environmental stress by adopting changes in gene expression at the transcriptional level. Eukaryotic RNA polymerase II is composed of more than ten polypeptide chains. The Rpb4 and Rpb7 subunits of yeast RNA polymerase II form a heterodimeric complex essential for promoter-directed transcription initiation in a reconstituted system. Although Rpb7 is the interacting partner of Rpb4, they play independent roles in transcriptional regulation of genes. The yeast DNA directed RNA polymerase II subunit Rpb11 is encoded by a single copy of the RPB11 gene located directly upstream of the topoisomerase I gene, TOPI, on chromosome XV. The sequence of the gene predicts an Rpb11 subunit of 120 amino acids, only two amino acids shorter than the Rpb9 polypeptide, which co-migrates with Rpb11 under most SDS-PAGE conditions. RPB11, an essential gene, encodes a nuclear protein closely related to AC19, an essential subunit shared by RNA polymerases I and III. Rpb11 contains a 19 amino acid segment found in three other yeast RNA polymerase subunits and the bacterial RNA polymerase subunit  $\alpha$ .

### REFERENCES

1. Woychik, N.A. and Young, R.A. 1989. RNA polymerase II subunit Rpb4 is essential for high- and low-temperature yeast cell growth. *Mol. Cell. Biol.* 9: 2854-2859.
2. Orlicky, S.M., Tran, P.T., Sayre, M.H. and Edwards, A.M. 2001. Dissociable Rpb4-Rpb7 subassembly of RNA polymerase II binds to single-strand nucleic acid and mediates a post-recruitment step in transcription initiation. *J. Biol. Chem.* 276: 10097-10102.
3. Pillai, B., Sampath, V., Sharma, N. and Sadhale, P. 2001. Rpb4, a non-essential subunit of core RNA polymerase II of *Saccharomyces cerevisiae* is important for activated transcription of a subset of genes. *J. Biol. Chem.* 276: 30641-30647.
4. Grandemange, S., Schaller, S., Yamano, S., Du Manoir, S., Shpakovski, G.V., Mattei, M.G., Kedinger, C. and Vigneron, M. 2001. A human RNA polymerase II subunit is encoded by a recently generated multigene family. *BMC Mol. Biol.* 2: 14. 11747469.
5. SWISS-PROT/TrEMBL (P38902). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

### SOURCE

Rpb11 (4Y11) is a mouse monoclonal antibody raised against recombinant full length Rpb11 of *S. cerevisiae* origin.

### PRODUCT

Each vial contains 100  $\mu$ l ascites containing IgG<sub>1</sub> with < 0.1% sodium azide.

### STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

### APPLICATIONS

Rpb11 (4Y11) is recommended for detection of Rpb11 of *S. cerevisiae* origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000) and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:5000).

Molecular Weight of Rpb11: 15 kDa.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.