

RPA194 (h): 293T Lysate: sc-111445

BACKGROUND

RNA polymerases transcribe nuclear genes for ribosomal RNA, thus representing ribosomal biogenesis. RNA polymerase I (Pol I) is located in the nucleolus and transcribes class I genes, which code for large ribosomal RNA. Different subunits of the Pol I transcription machinery are targets of various physiological stimuli, which suggests that multiple signaling pathways are involved in carrying out Pol I transcription. RPA40 and RPA16 are subunits of Pol I that associate with each other at an early stage of RNA polymerase I assembly. RPA40 is essential for the function and integrity of the complex and is also an essential subunit of RNA polymerase III (Pol III). RPA40, RPA16 and RPA135 encode the three subunits of RNA polymerase I, respectively. RPA194 is the largest subunit of RNA Pol I and is not a component of Pol II and Pol III.

REFERENCES

1. Nogi, Y., et al. 1991. An approach for isolation of mutants defective in 35S ribosomal RNA synthesis in *Saccharomyces cerevisiae*. *Proc. Natl. Acad. Sci. USA* 88: 7026-7030.
2. Yao, Y., et al. 1996. Mouse RNA polymerase I 16-kDa subunit able to associate with 40-kDa subunit is a homolog of yeast AC19 subunit of RNA polymerases I and III. *J. Biol. Chem.* 271: 32881-32885.
3. Seither, P., et al. 1997. Molecular cloning and characterization of the cDNA encoding the largest subunit of mouse RNA polymerase I. *Mol. Gen. Genet.* 255: 180-186.
4. Hoeger, H., et al. 1998. Deficient transcription of subunit RPA40 of RNA polymerase I and III in heart of rats with neonatal asphyxia. *Life Sci.* 62: 275-282.
5. Grummt, I. 1999. Regulation of mammalian ribosomal gene transcription by RNA polymerase I. *Prog. Nucleic Acid Res. Mol. Biol.* 62: 109-154.
6. Chen, H.K., et al. 1999. Human Nopp140, which interacts with RNA polymerase I: implications for rRNA gene transcription and nucleolar structural organization. *Mol. Cell. Biol.* 19: 8536-8546.
7. Mosgoeller, W., et al. 2000. Brain RNA polymerase and nucleolar structure in perinatal asphyxia of the rat. *Exp. Neurol.* 161: 174-182.

CHROMOSOMAL LOCATION

Genetic locus: POLR1A (human) mapping to 2p11.2.

PRODUCT

RPA194 (h): 293T Lysate represents a lysate of human RPA194 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

PROTOCOLS

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

APPLICATIONS

RPA194 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RPA194 antibodies. Recommended use: 10-20 µl per lane.

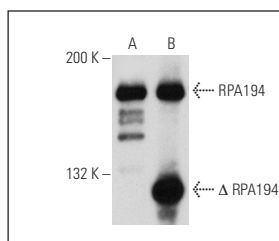
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RPA194 (C-1): sc-48385 is recommended as a positive control antibody for Western Blot analysis of enhanced human RPA194 expression in RPA194 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

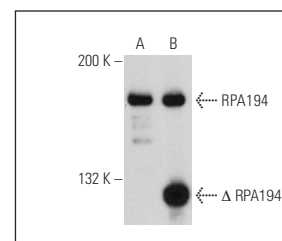
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



RPA194 (C-1): sc-48385. Western blot analysis of RPA194 expression in non-transfected: sc-117752 (A) and truncated human RPA194 transfected: sc-111445 (B) 293T whole cell lysates.



RPA194 (F-6): sc-46699. Western blot analysis of RPA194 expression in non-transfected: sc-117752 (A) and truncated human RPA194 transfected: sc-111445 (B) 293T whole cell lysates.

RESEARCH USE

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