

RPA194 (D-20): sc-32102

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

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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. 51: 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. 2: 180-186.
4. Hoeger, H., et al. 1998. Deficient transcription of subunit RPA 40 of RNA polymerase I and III in heart of rats with neonatal asphyxia. Life Sci. 4: 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. 12: 8536-8546.
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CHROMOSOMAL LOCATION

Genetic locus: POLR1A (human) mapping to 2p11.2; Rpo1-4 (mouse) mapping to 6 C1.

SOURCE

RPA194 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of RPA194 of human origin.

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-32102 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RPA194 (D-20) is recommended for detection of RPA194 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).

RPA194 (D-20) is also recommended for detection of RPA194 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RPA194 siRNA (h): sc-38244, RPA194 siRNA (m): sc-38245, RPA194 shRNA Plasmid (h): sc-38244-SH, RPA194 shRNA Plasmid (m): sc-38245-SH, RPA194 shRNA (h) Lentiviral Particles: sc-38244-V and RPA194 shRNA (m) Lentiviral Particles: sc-38245-V.

Molecular Weight of RPA194: 194 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, RAW 264.7 nuclear extract: sc-24961 or KNRK nuclear extract: sc-2141.

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.

STORAGE

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

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.



Try **RPA194 (C-1): sc-48385** or **RPA194 (F-6): sc-46699**, our highly recommended monoclonal alternatives to RPA194 (D-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **RPA194 (C-1): sc-48385**.