SANTA CRUZ BIOTECHNOLOGY, INC.

Pol III RPC32 (H-9): sc-48365

BACKGROUND

Eukaryotes produce three distinct classes of RNA polymerase, Pol I, II and III. Each polymerase is responsible for the synthesis of a different class of RNA. RNA polymerase I (Pol I) transcribes the rRNA (ribosomal RNA) genes for the precursor of the 28S, 18S and 5.8S molecules of the ribosome. RNA polymerase II transcribes protein-encoding genes into mRNA (messenger RNA) and snRNA (small nuclear RNA) genes into snRNAs that influence the processing of other classes of RNA. RNA polymerase III (Pol III) transcribes the 5S rRNA genes and all of the tRNA (transfer RNA) genes.

REFERENCES

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3. Zhong, S., Zhang, C. and Johnson, D.L. 2004. Epidermal growth factor enhances cellular TATA binding protein levels and induces RNA polymerase I- and III-dependent gene activity. Mol. Cell. Biol. 24: 5119-5129.
4. Hirsch, H.A., Jawdekar, G.W., Lee, K.A., Gu, L. and Henry, R.W. 2004. Distinct mechanisms for repression of RNA polymerase III transcription by the retinoblastoma tumor suppressor protein. Mol. Cell. Biol. 24: 5989-5999.
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8. Cramer, P. 2004. Structure and function of RNA polymerase II. Adv. Protein Chem. 67: 1-42.

CHROMOSOMAL LOCATION

Genetic locus: POLR3G (human) mapping to 5q14.3; Polr3g (mouse) mapping to 13 C3.

SOURCE

Pol III RPC32 (H-9) is a mouse monoclonal antibody raised against amino acids 1-136 of Pol III RPC32 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

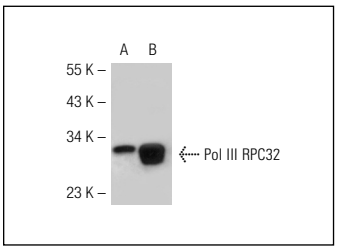
Pol III RPC32 (H-9) is recommended for detection of RPC 32 subunit of RNA polymerase III of mouse, rat and human origin by Western Blotting (starting dilution 1:10, dilution range 1:10 - 1:100), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Pol III RPC32 siRNA (h): sc-43507, Pol III RPC32 siRNA (m): sc-45840, Pol III RPC32 shRNA Plasmid (h): sc-43507-SH, Pol III RPC32 shRNA Plasmid (m): sc-45840-SH, Pol III RPC32 shRNA (h) Lentiviral Particles: sc-43507-V and Pol III RPC32 shRNA (m) Lentiviral Particles: sc-45840-V.

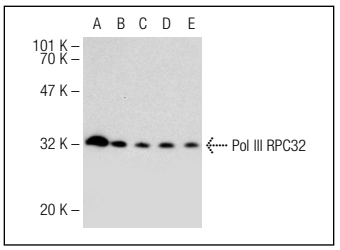
Molecular Weight of Pol III RPC32: 32 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or K-562 nuclear extract: sc-2130.

DATA



Pol III RPC32 (H-9): sc-48365. Western blot analysis of Pol III RPC32 expression in non-transfected: sc-117752 (**A**) and mouse Pol III RPC32 transfected: sc-122682 (**B**) 293T whole cell lysates.



Pol III RPC32 (H-9): sc-48365. Western blot analysis of Pol III RPC32 expression in SK-MEL-28 (**A**), PC-3 (**B**), K-562 (**C**), THP-1 (**D**) and MOLT-4 (**E**) nuclear extracts.

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.