

Pol I/II/III RPB8 (B-2): sc-398512

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. Each class of RNA polymerase is assembled from 9 to 15 different polypeptides. The RPB6 and RPB8 subunits are shared by all three RNA polymerases.

REFERENCES

1. Bushnell, D.A., et al. 2004. Structural basis of transcription: an RNA polymerase II-TFIIB cocrystal at 4.5 Angstroms. *Science* 303: 983-988.
2. Palangat, M., et al. 2004. Downstream DNA selectively affects a paused conformation of human RNA polymerase II. *J. Mol. Biol.* 341: 429-442.
3. Zhong, S., et al. 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., et al. 2004. Distinct mechanisms for repression of RNA polymerase III transcription by the retinoblastoma tumor suppressor protein. *Mol. Cell. Biol.* 24: 5989-5999.
5. White, R.J. 2004. RNA polymerase III transcription and cancer. *Oncogene* 23: 3208-3216.
6. Cabart, P., et al. 2004. BRCA1 cooperates with NUFIP and P-TEFb to activate transcription by RNA polymerase II. *Oncogene* 23: 5316-5329.

CHROMOSOMAL LOCATION

Genetic locus: POLR2H (human) mapping to 3q27.1; Polr2h (mouse) mapping to 16 B1.

SOURCE

Pol I/II/III RPB8 (B-2) is a mouse monoclonal antibody raised against amino acids 1-150 representing full length Pol I/II/III RPB8 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Pol I/II/III RPB8 (B-2) is available conjugated to agarose (sc-398512 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398512 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398512 PE), fluorescein (sc-398512 FITC), Alexa Fluor® 488 (sc-398512 AF488), Alexa Fluor® 546 (sc-398512 AF546), Alexa Fluor® 594 (sc-398512 AF594) or Alexa Fluor® 647 (sc-398512 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398512 AF680) or Alexa Fluor® 790 (sc-398512 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Pol I/II/III RPB8 (B-2) is recommended for detection of Pol I/II/III RPB8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for Pol I/II/III RPB8 siRNA (h): sc-45866, Pol I/II/III RPB8 siRNA (m): sc-45867, Pol I/II/III RPB8 shRNA Plasmid (h): sc-45866-SH, Pol I/II/III RPB8 shRNA Plasmid (m): sc-45867-SH, Pol I/II/III RPB8 shRNA (h) Lentiviral Particles: sc-45866-V and Pol I/II/III RPB8 shRNA (m) Lentiviral Particles: sc-45867-V.

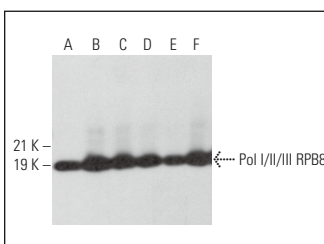
Molecular Weight of Pol I/II/III RPB8: 17 kDa.

Positive Controls: A-673 cell lysate: sc-2414, A-431 whole cell lysate: sc-2201 or Neuro-2A whole cell lysate: sc-364185.

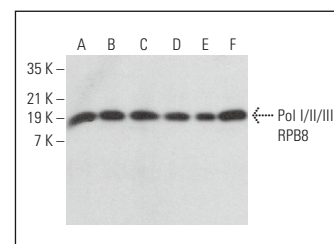
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Pol I/II/III RPB8 (B-2): sc-398512. Western blot analysis of Pol I/II/III RPB8 expression in U-251-MG (A), HL-60 (B), A-431 (C), A-673 (D), U-2 OS (E) and MDA-MB-435S (F) whole cell lysates.



Pol I/II/III RPB8 (B-2): sc-398512. Western blot analysis of Pol I/II/III RPB8 expression in A-673 (A), H4 (B), Neuro-2A (C), c4 (D), BYDP (E) and PC-12 (F) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhou, C.J., et al. 2020. Identification of antigen-specific neutrophils in the tonsils with recurrent acute inflammation. *Autoimmunity* 53: 237-244.

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.