SANTA CRUZ BIOTECHNOLOGY, INC.

Paf1 (E-7): sc-514491

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The Power to Question

BACKGROUND

In *Saccharomyces cerevisiae,* RNA polymerase II (RNAP II) mediates transcription elongation, and forms at least two distinct complexes. The first complex contains the Srb/mediator proteins, whereas the second complex, designated the Paf1 complex, contains Paf1, Cdc73, Hpr1, Ccr4, Rtf1, and Leo1. The Paf1 complex is required for full expression of a subset of yeast genes, particularly those responsive to signals from the Pkc1/MAP kinase cascade. The Paf1 complex mediates transcription elongation by physically associating with other transcription elongation factor complexes, including Spt16/Pob3 and Spt4/Spt5. It also plays an important role in the same regulatory pathways as Swi4/Swi6 and Mbp1/Swi6. Deletion of Paf1 or Cdc73 leads to increased recombination between direct repeats, while Paf1 and Ccr4 mutations demonstrate sensitivity to cell wall-damaging agents. Mutation of Rtf1 suppresses mutations in TBP, alters transcriptional start sites, and affects elongation.

REFERENCES

1. Chang, M., et al. 1999. A complex containing RNA polymerase II, Paf1p, Cdc73p, Hpr1p, and Ccr4p plays a role in protein kinase C signaling. Mol. Cell. Biol. 19: 1056-1067.
2. Mueller, C.L. and Jaehning, J.A. 2002. Ctr9, Rtf1, and Leo1 are components of the Paf1/RNA polymerase II complex. Mol. Cell. Biol. 22: 1971-1980.
3. Porter, S.E., et al. 2002. The yeast pafl-rNA polymerase II complex is required for full expression of a subset of cell cycle-regulated genes. Eukaryot. Cell 1: 830-842.

CHROMOSOMAL LOCATION

Genetic locus: PAF1 (human) mapping to 19q13.2; Paf1 (mouse) mapping to 7 A3.

SOURCE

Paf1 (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 36-59 near the N-terminus of Paf1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-514491 X, 200 µg/0.1 ml.

Paf1 (E-7) is available conjugated to agarose (sc-514491 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514491 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514491 PE), fluorescein (sc-514491 FITC), Alexa Fluor® 488 (sc-514491 AF488), Alexa Fluor® 546 (sc-514491 AF546), Alexa Fluor® 594 (sc-514491 AF594) or Alexa Fluor® 647 (sc-514491 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514491 AF680) or Alexa Fluor® 790 (sc-514491 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514491 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Paf1 (E-7) is recommended for detection of Paf1 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).

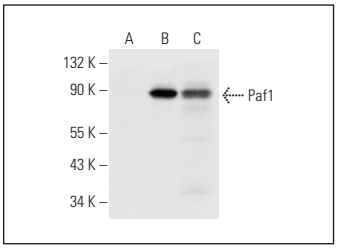
Suitable for use as control antibody for Paf1 siRNA (h): sc-76034, Paf1 siRNA (m): sc-76035, Paf1 shRNA Plasmid (h): sc-76034-SH, Paf1 shRNA Plasmid (m): sc-76035-SH, Paf1 shRNA (h) Lentiviral Particles: sc-76034-V and Paf1 shRNA (m) Lentiviral Particles: sc-76035-V.

Paf1 (E-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Paf1: 80 kDa.

Positive Controls: Paf1 (m2): 293T Lysate: sc-110302 or Caco-2 cell lysate: sc-2262.

DATA



Paf1 (E-7): sc-514491. Western blot analysis of Paf1 expression in non-transfected 293T: sc-117752 (**A**), mouse Paf1 transfected 293T: sc-110302 (**B**) and Caco-2 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zheng, J.J., et al. 2020. Novel role of Paf1 in attenuating radiosensitivity in cervical cancer by inhibiting IER5 transcription. Radiat. Oncol. 15: 131.
2. Tiwari, V., et al. 2021. LEO1 is a partner for Cockayne syndrome protein B (CSB) in response to transcription-blocking DNA damage. Nucleic Acids Res. 49: 6331-6346.

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 for detailed protocols and support products.