

# Paf1 (S-20): sc-74797

## 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

- 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.
- Mueller, C.L., et al. 2002. Ctr9, Rtf1, and Leo1 are components of the Paf1/RNA polymerase II complex. *Mol. Cell. Biol.* 22: 1971-1980.
- Porter, S.E., et al. 2002. The yeast paf1-rNA polymerase II complex is required for full expression of a subset of cell cycle-regulated genes. *Eukaryot. Cell* 1: 830-842.
- Betz, J.L., et al. 2002. Phenotypic analysis of Paf1/RNA polymerase II complex mutations reveals connections to cell cycle regulation, protein synthesis, and lipid and nucleic acid metabolism. *Mol. Genet. Genomics* 268: 272-285.
- Squazzo, S.L., et al. 2002. The Paf1 complex physically and functionally associates with transcription elongation factors *in vivo*. *EMBO J.* 21: 1764-1774.

## CHROMOSOMAL LOCATION

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

## SOURCE

Paf1 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Paf1 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-74797 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-74797 X, 200 µg/0.1 ml.

## APPLICATIONS

Paf1 (S-20) is recommended for detection of Paf1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Paf1 (S-20) is also recommended for detection of Paf1 in additional species, including equine, canine, bovine and porcine.

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 (S-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

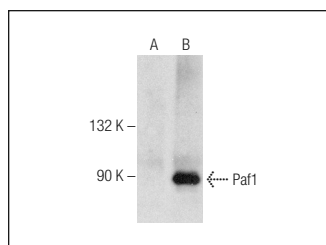
Molecular Weight of Paf1: 80 kDa.

Positive Controls: Paf1 (m): 293T Lysate: sc-110302.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Paf1 (S-20): sc-74797. Western blot analysis of Paf1 expression in non-transfected: sc-117752 (A) and mouse Paf1 transfected: sc-110302 (B) 293T whole cell lysates.

## 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.