SANTA CRUZ BIOTECHNOLOGY, INC.

Paf1 (m2): 293T Lysate: sc-110302

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 (3,5). 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., et al. 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.
4. 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.
5. 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 (mouse) mapping to 7 A3.

PRODUCT

Paf1 (m2): 293T Lysate represents a lysate of mouse Paf1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Paf1 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Paf1 antibodies. Recommended use: 10-20 µl per lane.

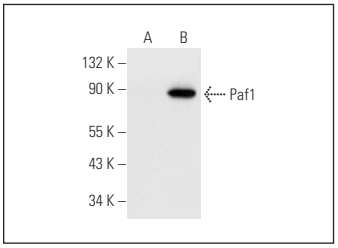
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Paf1 (E-7): sc-514491 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Paf1 expression in Paf1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

DATA



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

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.