

# Ctr9 (yN-18): sc-26313

## BACKGROUND

The Paf1 complex is required for full expression of a subset of genes in *S. cerevisiae*, particularly those responsive to signals from the Pkc1/MAP kinase cascade. Ctr9, a member of the Paf1 complex, is a nuclear protein involved in transcription elongation. Ctr9 contains several TPRs (tetrapeptide repeats) that are implicated in protein-protein interactions. Within the Paf1 complex, Ctr9 associates with Cdc73 and Paf1, which are both RNA polymerase II-associated proteins. Ctr9 mutants are inviable at higher temperatures and accumulate large cells, features which are due to their inability to activate transcription of G<sub>1</sub> cyclins when entering the cell cycle in budding yeast. The Paf1 complex associates with elongating RNA polymerase II and methylates histone H3 at lysines 4 and 79, activities which link transcription elongation to chromatin methylation.

## REFERENCES

- Koch, C., Wollmann, P., Dahl, M., Lottspeich, F. 1999. A role for Ctr9p and Paf1p in the regulation G1 cyclin expression in yeast. *Nucleic Acids Res.* 27: 2126-2134.
- Lichtenberg, H., Heyer, M., Hofer, M. 1999. Tpr1, a *S. pombe* protein involved in potassium transport. *FEBS Lett.* 457: 363-368.
- Betz, J.L., Chang, M., Washburn, T.M., Porter, S.E., Mueller, C.L., Jaehning, J.A. 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., Costa, P.J., Lindstrom, D.L., Kumer, K.E., Simic, R., Jennings, J.L., Link, A.J., Arndt, K.M., Hartzog, G.A. 2002. The Paf1 complex physically and functionally associates with transcription elongation factors *in vivo*. *EMBO J.* 21: 1764-1774.
- Mueller, C.L., Jaehning, J.A. 2002. Ctr9, Rtf1, and Leo1 are components of the Paf1/RNA polymerase II complex. *Mol. Cell. Biol.* 22: 1971-1980.
- Krogan, N.J., Dover, J., Wood, A., Schneider, J., Heidt, J., Boateng, M.A., Dean, K., Ryan, O.W., Golshani, A., Johnston, M., Greenblatt, J.F., Shilatifard, A. 2003. The Paf1 complex is required for histone H3 methylation by COMPASS and Dot1p. linking transcriptional elongation to histone methylation. *Mol. Cell* 11: 721-729.

## SOURCE

Ctr9 (yN-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Ctr9 of *Saccharomyces cerevisiae* 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-26313 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

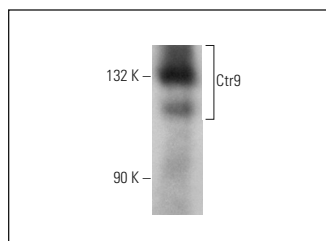
Ctr9 (yN-18) is recommended for detection of Ctr9 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Ctr9: 125 kDa.

## 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).

## DATA



Ctr9 (yN-18): sc-26313. Western blot analysis of Ctr9 expression in EGY48 whole cell lysate.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.