SANTA CRUZ BIOTECHNOLOGY, INC.

Pcf11 (E-17): sc-161998

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

In *Saccharomyces cerevisiae,* the cleavage/polyadenylation factor Pcf11 is a crucial regulatory factor required for recruiting polyadenylation machinery to elongating RNA polymerase II (RNAPII), and is necessary for correct transcriptional termination. Pcf11 (PCF11, cleavage and polyadenylation factor subunit, homolog *(S. cerevisiae)),* is a 1,555 amino acid nuclear protein that is a component of pre-mRNA cleavage complex II. It is suggested that Pcf11 is capable of promoting the dissociation of Pol II elongation complexes from DNA. Pcf11 contains a CTD-interaction domain that binds in a phospho-dependent manner to the heptad repeats within the RNA polymerase II CTD. The gene encoding Pcf11 is located on human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

1. de Vries, H., et al. 2000. Human pre-mRNA cleavage factor II(m) contains homologs of yeast proteins and bridges two other cleavage factors. EMBO J. 19: 5895-5904.
2. Licatalosi, D.D., et al. 2002. Functional interaction of yeast pre-mRNA 3' end processing factors with RNA polymerase II. Mol. Cell 9: 1101-1111.
3. Hammell, C.M., et al. 2002. Coupling of termination, 3' processing, and mRNA export. Mol. Cell. Biol. 22: 6441-6457.
4. Meinhart, A. and Cramer, P. 2004. Recognition of RNA polymerase II carboxy-terminal domain by 3'-RNA-processing factors. Nature 430: 223-226.
5. Noble, C.G., et al. 2005. Key features of the interaction between Pcf11 CID and RNA polymerase II CTD. Nat. Struct. Mol. Biol. 12: 144-151.
6. Hollingworth, D., et al. 2006. RNA polymerase II CTD phosphopeptides compete with RNA for the interaction with Pcf11. RNA 12: 555-560.

CHROMOSOMAL LOCATION

Genetic locus: PCF11 (human) mapping to 11q14.1; Pcf11 (mouse) mapping to 7 E1.

SOURCE

Pcf11 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Pcf11 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-161998 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Pcf11 (E-17) is recommended for detection of Pcf11 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).

Pcf11 (E-17) is also recommended for detection of Pcf11 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Pcf11 siRNA (h): sc-96335, Pcf11 siRNA (m): sc-152106, Pcf11 shRNA Plasmid (h): sc-96335-SH, Pcf11 shRNA Plasmid (m): sc-152106-SH, Pcf11 shRNA (h) Lentiviral Particles: sc-96335-V and Pcf11 shRNA (m) Lentiviral Particles: sc-152106-V.

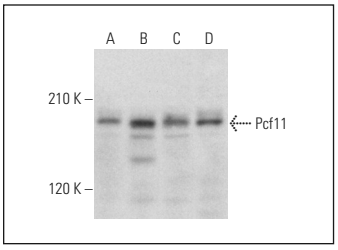
Molecular Weight of Pcf11: 173 kDa.

Positive Controls: HEK293T whole cell lysate: sc-45137, HeLa whole cell lysate: sc-2200 or CCRF-CEM cell lysate: sc-2225.

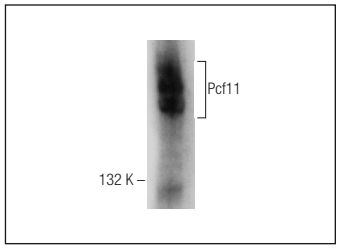
RECOMMENDED SECONDARY REAGENTS

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



Pcf11 (E-17): sc-161998. Western blot analysis of Pcf11 expression in HeLa (**A**), Jurkat (**B**) and HEK293T (**C**) whole cell lysates and HeLa nuclear extract (**D**).



Pcf11 (E-17): sc-161998. Western blot analysis of Pcf11 expression in CCRF-CEM whole cell lysate.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.