

PCNA (h): 293T Lysate: sc-159920

BACKGROUND

The proliferating cell nuclear antigen (PCNA), a protein synthesized in early G₁ and S phases of the cell cycle, functions in cell cycle progression, DNA replication and DNA repair. In early S phase, PCNA exhibits granular distribution and is absent from the nucleoli, however, in late S phase, it relocates to the nucleoli. PCNA exists in two basic forms: one involved in ongoing DNA replication, which localizes specifically to the nucleus, and a second, soluble form, not implicated in constant synthesis. Interestingly, the latter form degrades in the presence of organic solvents, rendering it undetectable by histological methods in tissues using organic fixatives, and thus also providing a method of visualizing only the synthesizing form.

REFERENCES

1. Bravo, R., et al. 1987. Existence of two populations of cyclin/proliferating cell nuclear antigen during the cell cycle: association with DNA replication sites. *J. Cell Biol.* 105: 1549-1554.
2. Waseem, N.H. and Lane, D.P. 1990. Monoclonal antibody analysis of the proliferating cell nuclear antigen (PCNA). Structural conservation and the detection of a nucleolar form. *J. Cell Sci.* 96: 121-129.
3. Woods, A.L., et al. 1991. The assessment of proliferating cell nuclear antigen (PCNA) immunostaining in primary gastrointestinal lymphomas and its relationship to histological grade, S+G₂+M phase fraction (flow cytometric analysis) and prognosis. *Histopathology* 19: 21-27.
4. Baida, A., et al. 2003. Germline mutations at microsatellite loci in homozygous and heterozygous mutants for mismatch repair and PCNA genes in *Drosophila*. *DNA Repair* 2: 827-833.
5. Thacker, S.A., et al. 2003. The contribution of E2F-regulated transcription to *Drosophila* PCNA gene function. *Curr. Biol.* 13: 53-58.
6. Hong, R., et al. 2003. The human proliferating cell nuclear antigen regulates transcriptional co-activator p300 activity and promotes transcriptional repression. *J. Biol. Chem.* 278: 44505-44513.
7. Kwon, E., et al. 2004. Armadillo/Pangolin regulates PCNA and DREF promoter activities. *Biochim. Biophys. Acta* 1679: 256-262.
8. Lopez, A., et al. 2005. Germline genomic instability in PCNA mutants of *Drosophila*: DNA fingerprinting and microsatellite analysis. *Mutat. Res.* 570: 253-265.
9. Kisielowska, J., et al. 2005. GFP-PCNA as an S phase marker in embryos during the first and subsequent cell cycles. *Biol. Cell* 97: 221-229.

CHROMOSOMAL LOCATION

Genetic locus: PCNA (human) mapping to 20p13.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

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

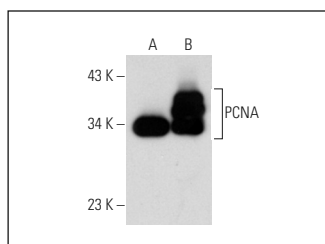
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PCNA (SPM350): sc-65598 is recommended as a positive control antibody for Western Blot analysis of enhanced human PCNA expression in PCNA transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

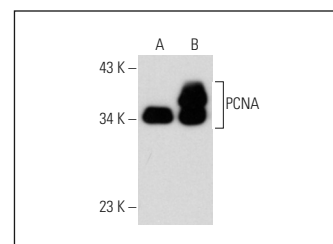
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



PCNA (SPM350): sc-65598. Western blot analysis of PCNA expression in non-transfected: sc-117752 (A) and human PCNA transfected: sc-159920 (B) 293T whole cell lysates.



PCNA (PC5): sc-53408. Western blot analysis of PCNA expression in non-transfected: sc-117752 (A) and human PCNA transfected: sc-159920 (B) 293T whole cell lysates.

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.

PROTOCOLS

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