

PCNA (FL-261): sc-7907



The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: PCNA (human) mapping to 20p13; PcnA (mouse) mapping to 2 F2.

SOURCE

PCNA (FL-261) is a rabbit polyclonal antibody raised against amino acids 1-261 representing full length PCNA 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.

Available as agarose conjugate for immunoprecipitation, sc-7907 AC, 500 µg/0.25 ml agarose in 1 ml; as HRP conjugate for Western blotting, sc-7907 HRP, 200 µg/ml; as fluorescein (sc-7907 FITC) or rhodamine (sc-7907 TRITC) conjugates for immunofluorescence, 200 µg/ml; and as Alexa Fluor® 405 (sc-7907 AF405), Alexa Fluor® 488 (sc-7907 AF488) or Alexa Fluor® 647 (sc-7907 AF647) conjugates for immunofluorescence; 100 µg/2 ml.

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APPLICATIONS

PCNA (FL-261) is recommended for detection of PCNA of mouse, rat, human, insect, *Drosophila*, *Xenopus* and zebrafish 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PCNA (FL-261) is also recommended for detection of PCNA in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PCNA siRNA (h): sc-29440, PCNA siRNA (m): sc-29441, PCNA shRNA Plasmid (h): sc-29440-SH, PCNA shRNA Plasmid (m): sc-29441-SH, PCNA shRNA (h) Lentiviral Particles: sc-29440-V and PCNA shRNA (m) Lentiviral Particles: sc-29441-V.

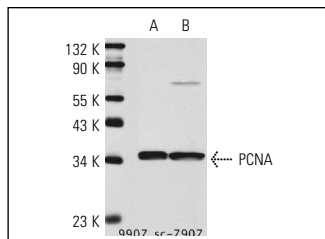
Molecular Weight of PCNA: 36 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

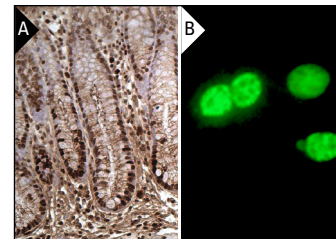
STORAGE

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

DATA



PCNA (FL-261): sc-7907. Western blot analysis of PCNA expression in A-431 (A) and NIH/3T3 (B) whole cell lysates.



PCNA (FL-261): sc-7907. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse colon tissue showing nuclear staining of glandular cells and interstitial cells. Kindly provided by Dr. Jun Hee Lee, Department of Molecular and Integrative Physiology, University of Michigan Geriatric Center. (A). Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear localization (B).

SELECT PRODUCT CITATIONS

- Sasaki, T., et al. 2000. Colorectal carcinomas in mice lacking the catalytic subunit of PI(3)K. *Nature* 406: 897-902.
- Yang, W., et al. 2012. ERK1/2-dependent phosphorylation and nuclear translocation of PKM2 promotes the Warburg effect. *Nat. Cell Biol.* 14: 1295-1304.
- Ogata, K., et al. 2012. Upregulation of HNF-1β during experimental acute kidney injury plays a crucial role in renal tubule regeneration. *Am. J. Physiol. Renal Physiol.* 303: F689-F699.
- Sauvat, F., et al. 2013. Ovarian function is restored after grafting of cryopreserved immature ovary in ewes. *FASEB J.* 27: 1511-1518.
- Shi, G., et al. 2013. Expression and functional role of Sox9 in human epidermal keratinocytes. *PLoS ONE* 8: e54355.
- Jean, J.C., et al. 2013. Transcription factor Klf4, induced in the lung by oxygen at birth, regulates perinatal fibroblast and myofibroblast differentiation. *PLoS ONE* 8: e54806.
- Mosbech, A., et al. 2013. The deubiquitylating enzyme USP44 counteracts the DNA double-strand break response mediated by the RNF8 and RNF168 ubiquitin ligases. *J. Biol. Chem.* 288: 16579-16587.

RESEARCH USE

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



Try **PCNA (PC10): sc-56** or **PCNA (F-2): sc-25280**, our highly recommended monoclonal alternatives to PCNA (FL-261). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **PCNA (PC10): sc-56**.