

Anti- PCNA antibody, rabbit polyclonal, Validated with PCNA protein

70-080 100 µg

Shipping and Storage: Shipped at 4°C or -20°C and store at -20°C.

Immunogen: Purified recombinant human PCNA (full-size, no-tag attached ,
BioAcademia #10-151)

Validation: Specificity has been validated by WB with purified full-size PCNA protein (Fig.2).

Form: Purified IgG, 1 mg/ml in PBS- with 50% glycerol. Filter sterilized. No preservative nor carrier protein added.

Reactivity: Mammalian PCNA including human, mouse, rat, hamster, and PCNA of chicken, Xenopus

Applications:

1. Western blotting (1/1,000-1/2,000 dilution)
2. Immuno-precipitation (1/100-1/500)
3. Immuno-fluorescence staining / Immuno-cytochemistry (1/100~1/1,000 dilution)
4. Dot blot (1/500~1/2,000). Could detect less than 0.3 ng of PCNA
5. ELISA (1/500~1/2,000). Could detect less than 1 ng of PCNA by direct ELISA.

Background: Proliferating cell nuclear antigen (**PCNA**) is a 29 kDa homotrimeric protein known to act as a co-factor for DNA polymerase delta, which is responsible for leading strand DNA replication. PCNA was originally identified as an antigen that is expressed in the nuclei of cells during the DNA synthesis phase of the cell cycle. Crystal structure data suggests that a PCNA homotrimer ring can encircle and slide along the DNA double helix. Multiple proteins involved in DNA replication, DNA repair, and cell cycle control bind to PCNA rather than directly associating with DNA, thus facilitating fast processing of DNA. PCNA is a useful marker for DNA synthesis and is highly conserved among most species.

Data Link: Swiss-Prot [P12004](#) (human), [P04961](#) (rat), [P17918](#) (mouse), [P18248](#) (Xenopus laevis)

Reference: No publication yet using this antibody.

Related product: [#10-151](#) PCNA, functional

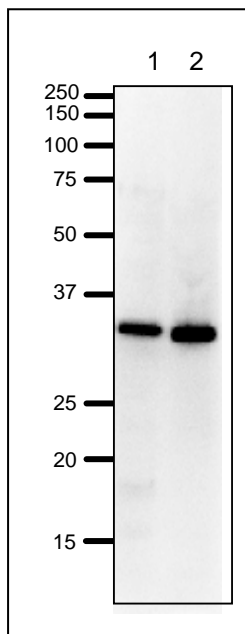


Fig.1 Western Blot of PCNA in HeLa cells and Xenopus egg extract.

Anti-PCNA antibody was used at 1/1,000 dilution. Second antibody (goat anti-rabbit IgG antibody HRP-conjugated, ab97051) was used at 1/10,000 dilution.

1. HeLa cell extract (20 μ g)

2. Xenopus egg extract (20 μ g)

Molecular mass of PCNA is 29 kDa

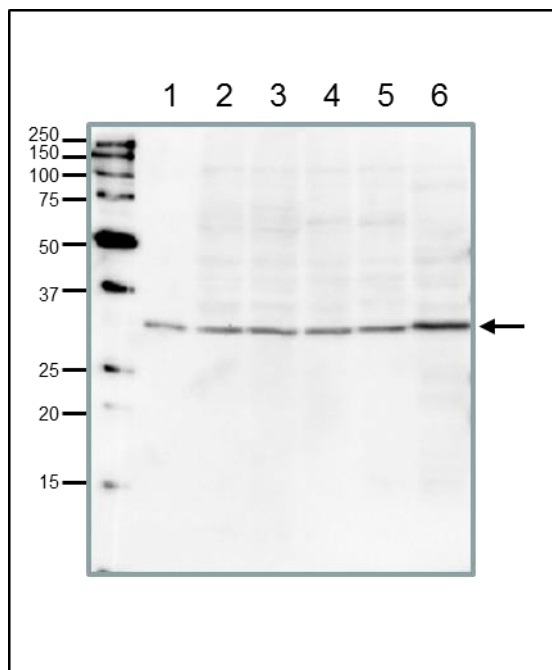


Fig.2 Western blot of PCNA in the whole cell extracts.

Anti-PCNA antibody was used at 1/1,000 dilution. Second antibody (goat anti-rabbit IgG antibody HRP-conjugated, ab97051) was used at 1/10,000 dilution.

1. Full-size recombinant human PCNA protein (5 ng)

2. HeLa (human), 20 μ g

3. MCF7 (human), 20 μ g

4. NIH3T3 (mouse), 20 μ g

5. CHO (hamster), 20 μ g

6. Xenopus laevis egg (frog), 20 μ g

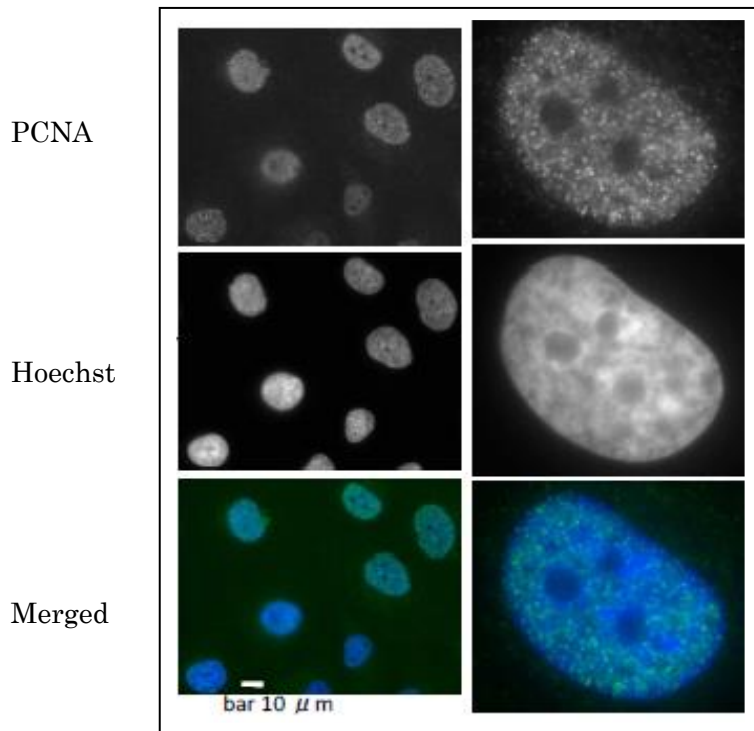


Fig.3 Immuno-fluorescence staining of PCNA. in GM0637 cells (human fibroblast). Cells were fixed with 4% paraformaldehyde, permeabilized with 0.5% Triton and added with the antibody at 1/100 dilution. As the second antibody, goat anti-rabbit IgG conjugated with Alexa 488 was used at 1/10,000 dilution. DNA was stained with Heachst. PCNA foci were detected in the nuclei