

## PCNA (human), functional

10-151 20  $\mu$ g, 10-152 100  $\mu$ g

**PCNA (Proliferating cell nuclear antigen)** is a homotrimeric protein (261 aa; 29 kDa) 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 encircles and slides along the DNA double helix. Multiple proteins involved in DNA replication, DNA repair, and cell cycle control bind to **PCNA** rather than directly associates with DNA, thus facilitating rapid processing of DNA. **PCNA** is a useful marker for DNA synthesis and some cancers. It is highly conserved among most animals.

### Applications confirmed:

1. Functional studies on DNA replication, recombination and repair. (Ref 2, 3, 5, 6, 7, 8, 9, 10).
2. Identification of proteins interacting with PCNA by using PCNA-conjugated resin. (Ref 1, 5)
3. Ubiquitination targets (Ref 4, 9, 10).
- 4 SDS-PAGE (Fig. 1). 5. Western blot (Fig. 2) . 6. Dot blot. 7. ELISA. Not tested for other applications.

**Source:** Human PCNA was over-expressed in *E. coli* as a recombinant full-size protein without any tag and highly purified.

**Form:** 1.0 mg/ml in 25 mM HEPES (pH 7.9), 1 mM EDTA,

0.01% NP40, 1 mM DTT, 2 ug/ml leupeptin, 0.1 mM PMSF, 75 mM NaCl, 50% glycerol.

**Storage:** Sent at 4°C or -20°C. Upon arrival spin-down and store at -20°C (or at -80°C for longer storage)

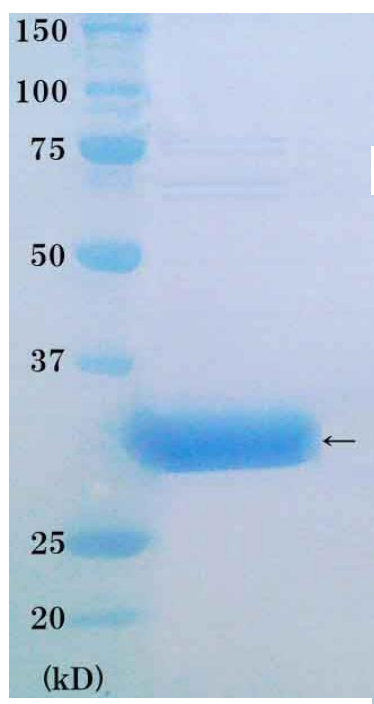
**Purity:** Greater than 98% purity as determined by SDS-PAGE (Fig.1).

**Data Link:** Swiss-Prot [P12004](#) (human), [P04961](#) (rat), [P17918](#) (mouse), [Q9PTP1](#) (Zebrafish).

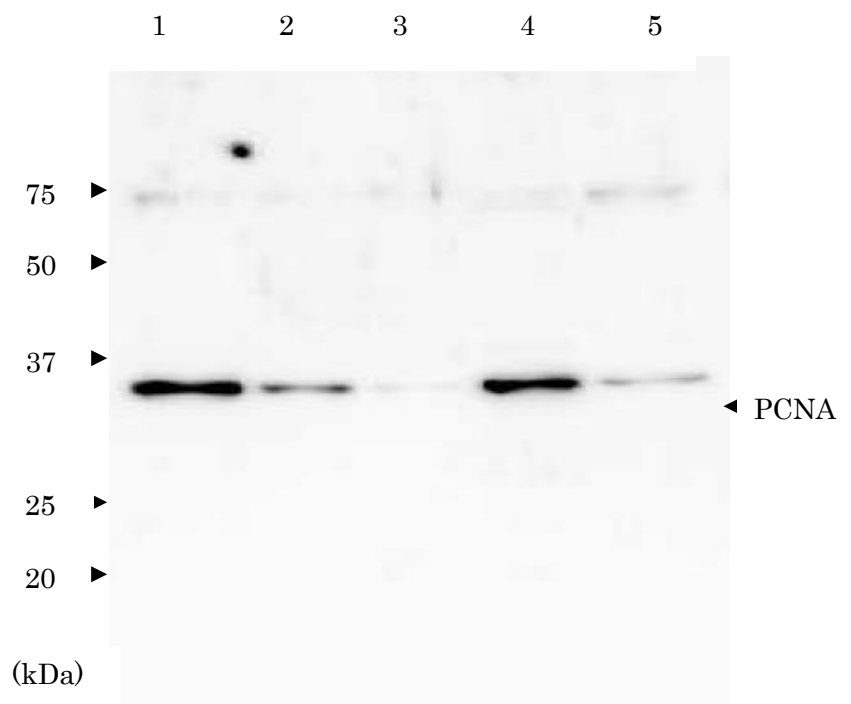
**References:** This product has been used in the following References.

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**Fig. 1. SDS-PAGE analysis of purified PCNA protein.**



**Fig. 2 Western Blotting of PCNA.** Lane 1; Purified PCNA (3 ng). Lane 2; Purified PCNA (1 ng). Lane 3; Purified PCNA (0.3 ng). Lane 4; Crude extract of HeLa cells (10  $\mu$ g). Lane 5; Crude extract of HeLa cells (2  $\mu$ g). Primary antibody is anti-PCNA antibody, BioAcademia # 70-080.

Related product; #70-080 Anti- PCNA antibody, rabbit polyclonal