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Recombinant Human Proliferating Cell Nuclear Antigen (PCNA)

Catalog No.	Size	Species	Protein Accession No.
230-00030	10, 50, 100 µg	Human	AAX43156

Synonyms

Proliferating cell nuclear antigen, PCNA, DNA polymerase delta auxiliary protein, cyclin, proliferating cell nuclear antigen.

Description

Proliferating Cell Nuclear Antigen (**PCNA**) is a protein that acts as a processivity factor for DNA polymerase δ in eukaryotic cells. PCNA is found in the nucleus and is a cofactor of DNA polymerase delta increasing the processivity of leading strand synthesis during DNA replication. Therefore, PCNA is important factor for both DNA synthesis and DNA repair. In response to DNA damage, PCNA protein is ubiquitinated and is involved in the RAD6-dependent DNA repair pathway.

Preparation

The gene encoding the full length of human PCNA protein was cloned and expressed in *Escherichia coli*. The recombinant PCNA protein was purified by proprietary chromatographic techniques.

Source

Recombinant protein, purified from *E. coli*.

Predicted Molecular Mass

~29 kDa.

Formulation

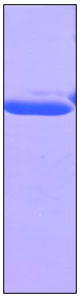
- Fine white powder, lyophilized.
- Recombinant PCNA was lyophilized from a 0.2 µm filtered phosphate-buffered saline (PBS) with protein concentration at 0.8 mg/mL.
- It is recommended to briefly spin the vial prior to opening, bring the contents to the bottom, and reconstitute the lyophilized product with sterile 18 MΩ-cm deionized water or your desired buffer.

Stability & Storage

- Lyophilized product is stable at room temperature for 3 weeks, it is recommended to be stored desiccated below -20°C in a manual defrost freezer.
- Upon reconstituted, the protein should be stored at 4°C for one week. For long term storage, it is recommended to add a carrier protein (0.1% HSA or BSA) and store at -20 or -80°C. **Please avoid repeated freeze-thaw cycles.**

Purity

>95%, determined by SDS-PAGE and stained with Commassie blue. (See image on the right)



References

1. Miyata T, et al. (2005) Open clamp structure in the clamp-loading complex visualized by electron microscopic image analysis. *Proc. Natl. Acad. Sci. U.S.A.* **102** (39): 13795–800.
2. Maga, G, et al. (2002)Human DNA polymerase lambda functionally and physically interacts with proliferating cell nuclear antigen in normal and translesion DNA synthesis. *J. Biol. Chem.* (United States) **277** (50): 48434–40.
3. Haracska, L, et al. (2001). Physical and functional interactions of human DNA polymerase eta with PCNA. *Mol. Cell. Biol.* **21** (21): 7199–206.