

PCNA Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52806**Specification**

PCNA Antibody - Product Information

| | |
|-------------------|------------------------|
| Application | IP, WB, ICC |
| Primary Accession | P12004 |
| Reactivity | Human, Mouse |
| Host | Mouse |
| Clonality | Monoclonal |
| Isotype | IgG2b |
| Calculated MW | 36 KDa |

PCNA Antibody - Additional Information**Gene ID** 5111**Other Names**

Cyclin;DNA polymerase delta auxiliary protein;HGCN8729;MGC8367;Mutagen-sensitive 209 protein ;OTTHUMP00000030189;OTTHUMP00000030190;PCNA;Pcna/cyclin;PCNA_HUMAN;PCNAR;Polymerase delta accessory protein;Proliferating Cell Nuclear Antigen.

Dilution

IP~~1:500
WB~~1:1000
ICC~~1:100

Format

ascites

Storage

Store at -20 °C.Stable for 12 months from date of receipt

PCNA Antibody - Protein Information**Name** PCNA**Function**

Auxiliary protein of DNA polymerase delta and epsilon, is involved in the control of eukaryotic DNA replication by increasing the polymerase's processibility during elongation of the leading strand (PubMed:35585232). Induces a robust stimulatory effect on the 3'-5' exonuclease and 3'-phosphodiesterase, but not apurinic-apyrimidinic (AP) endonuclease, APEX2 activities. Has to be loaded onto DNA in order to be able to stimulate APEX2. Plays a key role in DNA damage response (DDR) by being conveniently positioned at the replication fork to coordinate DNA replication with DNA repair and DNA damage tolerance pathways (PubMed:24939902). Acts as a loading platform to recruit DDR proteins that allow

completion of DNA replication after DNA damage and promote postreplication repair: Monoubiquitinated PCNA leads to recruitment of translesion (TLS) polymerases, while 'Lys-63'-linked polyubiquitination of PCNA is involved in error-free pathway and employs recombination mechanisms to synthesize across the lesion (PubMed:24695737).

Cellular Location

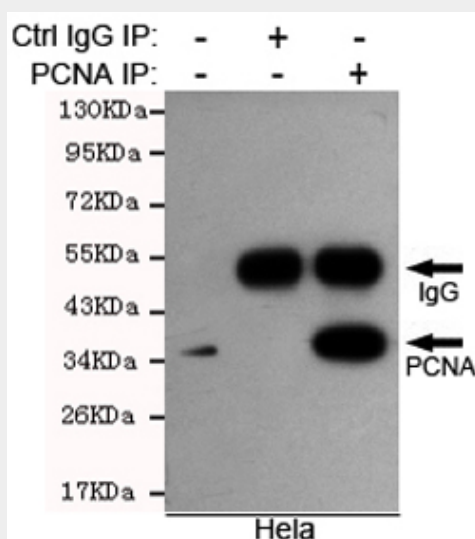
Nucleus Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication foci during S phase (PubMed:15543136). Together with APEX2, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents.

PCNA Antibody - Protocols

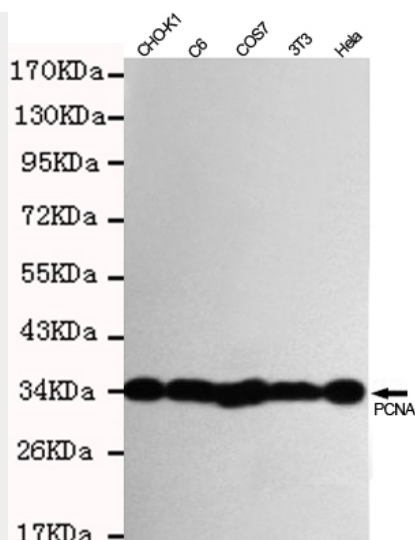
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

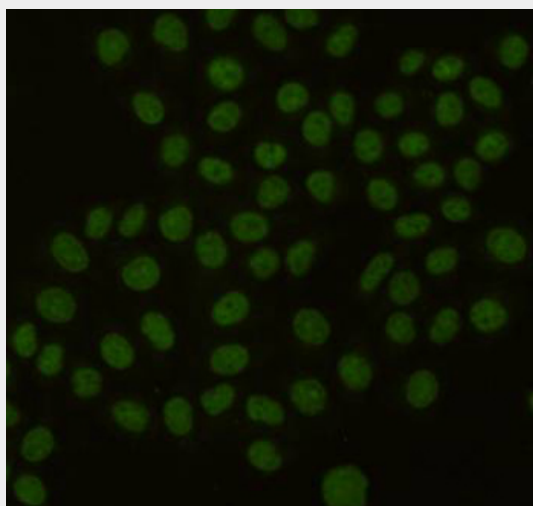
PCNA Antibody - Images



Immunoprecipitation analysis of HeLa cell lysates using PCNA mouse mAb.



Western blot detection of PCNA in HeLa, 3T3, COS7, C6 and CHO-K1 cell lysates using PCNA mouse mAb (1:1000 diluted). Predicted band size: 36KDa. Observed band size: 36KDa.



Immunocytochemistry staining of HeLa cells using PCNA mouse mAb (dilution 1:100). Fixed in 100% methanol for 2hr at -20°C.

PCNA Antibody - Background

Auxiliary protein of DNA polymerase delta and is involved in the control of eukaryotic DNA replication by increasing the polymerase's processibility during elongation of the leading strand. Induces a robust stimulatory effect on the 3'-5' exonuclease and 3'-phosphodiesterase, but not apurinic-apyrimidinic (AP) endonuclease, APEX2 activities. Has to be loaded onto DNA in order to be able to stimulate APEX2. Plays a key role in DNA damage response (DDR) by being conveniently positioned at the replication fork to coordinate DNA replication with DNA repair and DNA damage tolerance pathways. Acts as a loading platform to recruit DDR proteins that allow completion of DNA replication after DNA damage and promote postreplication repair: Monoubiquitinated PCNA leads to recruitment of translesion (TLS) polymerases, while 'Lys-63'-linked polyubiquitination of PCNA is involved in error-free pathway and employs recombination mechanisms to synthesize across the lesion.

PCNA Antibody - References

Almendral J.M., et al. Proc. Natl. Acad. Sci. U.S.A. 84:1575-1579(1987).

Travali S.,et al.J. Biol. Chem. 264:7466-7472(1989).

Ota T.,et al.Nat. Genet. 36:40-45(2004).

Deloukas P.,et al.Nature 414:865-871(2001).

Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.