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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;Polymera se 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).

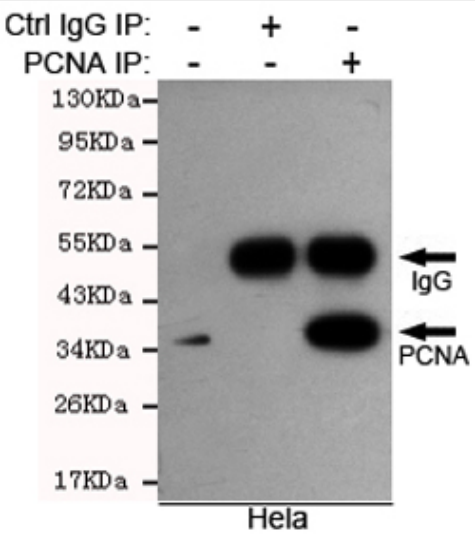
Cellular Location
Nucleus. Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication 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 Cytomety
- Cell Culture

PCNA Antibody - Images



Immunoprecipitation analysis of Hela cell lysates using PCNA mouse mAb.

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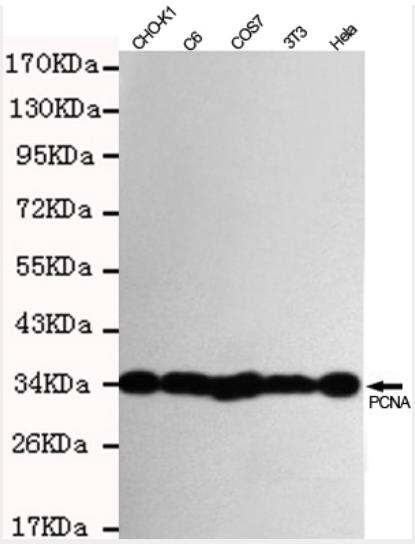
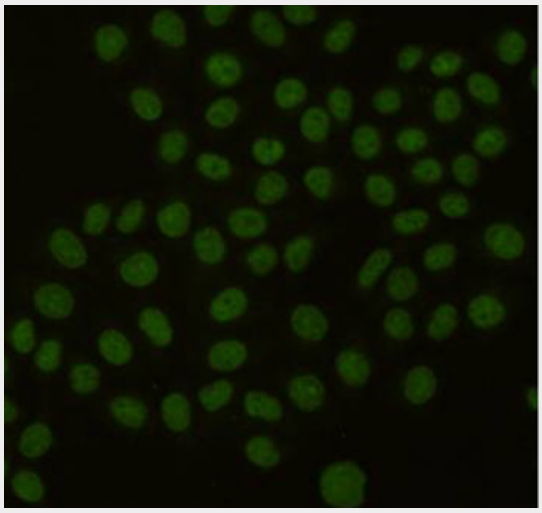


Western blot detection of PCNA in Hela,3T3,COS7,C6 and CHO-K1 cell lysates using PCNA mouse mAb (1:1000 diluted).Predicted band size:36KDa.Observed band size:36KDa.



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

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.