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# PCNA Antibody (Center) Blocking Peptide

**Synthetic peptide**
**Catalog # BP2835c**

## Specification

### PCNA Antibody (Center) Blocking Peptide - Product Information

Primary Accession P12004

### PCNA Antibody (Center) Blocking Peptide - Additional Information

**Gene ID** 5111

**Other Names**
Proliferating cell nuclear antigen, PCNA, Cyclin, PCNA

**Target/Specificity**
The synthetic peptide sequence used to generate the antibody <a href=/products/AP2835c>AP2835c</a> was selected from the Center region of human PCNA. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

### PCNA Antibody (Center) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/35585232" target="_blank">35585232</a>). 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:<a href="http://www.uniprot.org/citations/24939902" target="_blank">24939902</a>). 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:<a href="http://www.uniprot.org/citations/24695737" target="_blank">24695737</a>).

**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 (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

## PCNA Antibody (Center) Blocking Peptide - Images

## PCNA Antibody (Center) Blocking Peptide - Background

PCNA is found in the nucleus and is a cofactor of DNA polymerase delta. This protein acts as a homotrimer and helps increase the processivity of leading strand synthesis during DNA replication. In response to DNA damage, this protein is ubiquitinated and is involved in the RAD6-dependent DNA repair pathway.

## PCNA Antibody (Center) Blocking Peptide - References

Wang,Y., J. Cell. Biochem. 106 (3), 409-413 (2009)Maga,G., Proc. Natl. Acad. Sci. U.S.A. 105 (52), 20689-20694 (2008)Acharya,N., Proc. Natl. Acad. Sci. U.S.A. 105 (46), 17724-17729 (2008)