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# PCNA (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide

**Mouse Monoclonal Antibody [Clone PCNA/694 ]**
**Catalog # AH12050**

## Specification

### PCNA (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide - Product Information

| | |
|---|---|
| Application | **WB, IHC, IF, FC** |
| Primary Accession | P12004 |
| Other Accession | 5111, 147433, 728886 |
| Reactivity | **Human** |
| Host | **Mouse** |
| Clonality | **Monoclonal** |
| Isotype | **Mouse / IgG2a, kappa** |
| Calculated MW | **36kDa KDa** |

### PCNA (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide - Additional Information

**Gene ID** 5111

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

**Application Note**
WB~~1:1000<br \>IHC~~1:100~500<br \>IF~~1:50~200<br \>FC~~1:10~50

**Storage**
Store at 2 to 8°C.Antibody is stable for 24 months.

**Precautions**
PCNA (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

### PCNA (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide - 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>).

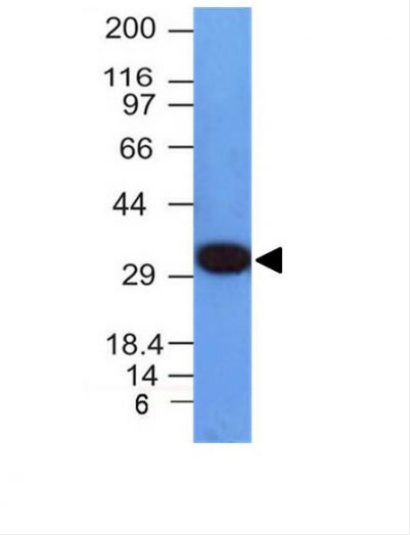
**Cellular Location**
Nucleus. Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at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

## PCNA (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide - 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 (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide - Images




Western Blot Analysis of HepG2 Cell Lysate using PCNA Monoclonal Antibody (PCNA/694)

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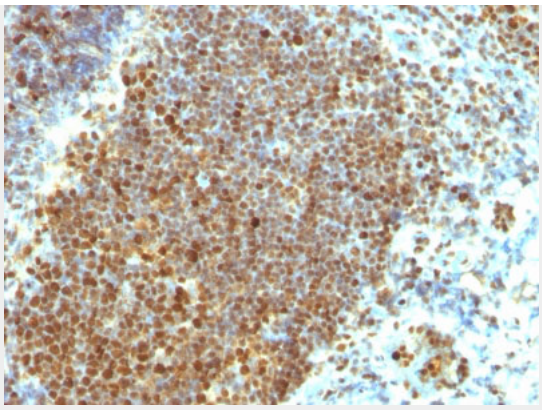

Formalin-fixed, paraffin-embedded human Tonsil stained with PCNA Monoclonal Antibody (PCNA/694)

**PCNA (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide - Background**

Recognizes a non-histone protein of 36kDa, which is identified as proliferating cell nuclear antigen (PCNA). It is also known as cyclin or polymerase delta auxiliary protein. Elevated expression of PCNA/cyclin has been shown in the nucleus during late G1 phase immediately before the onset of DNA synthesis, becoming maximal during S-phase and declining during G2 and M phases. This MAb is excellent for multiple applications.

**PCNA (Proliferating Cell Nuclear Antigen) (G1- & S-phase Marker) Antibody - With BSA and Azide - References**

Waseem NH & Lane DP. 1990. J Cell Sci. 96:121-9. | Hall PA et al. 1990. J. Pathol. 162(4):285-94