

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	,1,2,3,4,
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

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: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

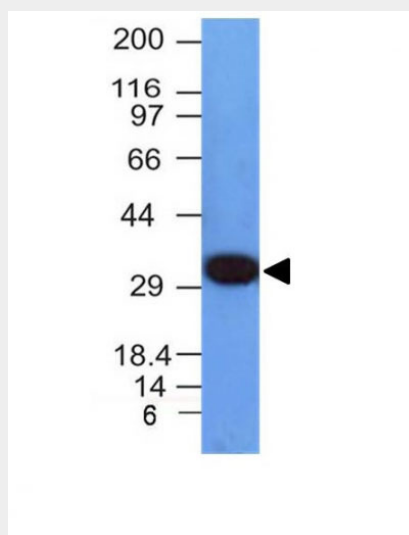
Nucleus. Note=Colocalizes with CREBBP, EP300 and POLD1 to sites of DNA damage (PubMed:24939902). Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase (PubMed:15543136). Co-localizes with SMARCA5/SNF2H and BAZ1B/WSTF at replication foci during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

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

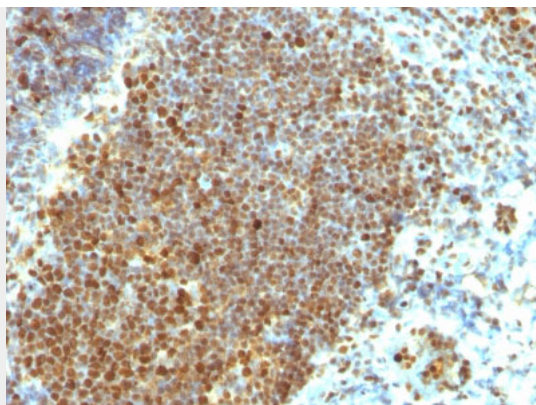
Provided below are standard protocols that you may find useful for product applications.

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



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