

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

Mouse Monoclonal Antibody [Clone SPM350 ]  
Catalog # AH10652

## Product Information

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| <b>Application</b>       | WB, IF, FC, IHC-P  |
| <b>Primary Accession</b> | <a href="#">P12004</a>   |
| <b>Other Accession</b>   | <a href="#">5111</a> , <a href="#">147433</a> , <a href="#">728886</a> |
| <b>Reactivity</b>        | Human, Mouse, Rat, Zebrafish, Monkey, Pig, Chicken, Yeast, Drosophila  |
| <b>Host</b>              | Mouse  |
| <b>Clonality</b>         | Monoclonal   |
| <b>Isotype</b>           | Mouse / IgG2a, kappa   |
| <b>Clone Names</b>       | SPM350   |
| <b>Calculated MW</b>     | 28769  |

## Additional Information

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| <b>Gene ID</b>          | 5111   |
| <b>Other Names</b>      | Proliferating cell nuclear antigen, PCNA, Cyclin, PCNA   |
| <b>Application Note</b> | WB~~1:1000 IF~~1:50~200 FC~~1:10~50 IHC-P~~N/A   |
| <b>Format</b>           | 200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.           |
| <b>Storage</b>          | Store at 2 to 8°C. Antibody is stable for 24 months.   |
| <b>Precautions</b>      | 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. |

## Protein Information

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| <b>Name</b>     | PCNA   |
| <b>Function</b> | Confers DNA tethering and processivity to DNA polymerases and other proteins (PubMed: <a href="#">24695737</a> , PubMed: <a href="#">24939902</a> , PubMed: <a href="#">35585232</a> ). Auxiliary protein of DNA polymerase delta and epsilon, is involved in the control of DNA replication by increasing the polymerases' processivity during elongation of the leading strand (PubMed: <a href="#">35585232</a> ). Induces a robust stimulatory effect on the 3'-5' exonuclease and 3'-phosphodiesterase, but not apurinic-aprimidinic (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

## Background

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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.

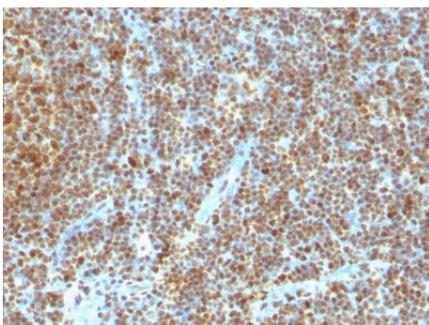
## References

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Waseem NH & Lane DP. 1990. J Cell Sci. 96:121-9. | Hall PA et al. 1990. J. Pathol. 162(4):285-94. | Landberg G & Roos G. 1991. Cancer Res. 51 (17):4570-4. | Woods AL et al. 1991. Histopathol. 19(1):21-7 | Yu,CC. et al. 1991. Histopathol. 19(1):29-33

## Images

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Formalin-fixed, paraffin-embedded human Tonsil stained with PCNA Monoclonal Antibody (SPM350)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.