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# Anti-PCNA Antibody (clone PC10)

Mouse Anti Human Monoclonal Antibody
Catalog # ALS17848

## Product Information

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| **Application** | WB, IHC-P, IHC-F, IP, FC |
| **Primary Accession** | P12004 |
| **Predicted** | Human, Mouse, Rat, Rabbit, Hamster, Chicken, Rhesus, Sheep, Xenopus, Horse, Dog, Cat |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2a |
| **Clone Names** | PC10 |
| **Calculated MW** | 28769 |
| **Concentration (mg/ml)** | 1 mg/ml |

## Additional Information

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| **Gene ID** | 5111 |
| **Alias Symbol** | PCNA |
| **Other Names** | PCNA, Cyclin |
| **Target/Specificity** | Recognizes the proliferating cell nuclear antigen, also known as PCNA or cyclin. PCNA is a 261 amino acid ~28 kD nuclear protein vital for cellular DNA synthesis at the replication fork through its interaction with. PCNA is the auxilliary protein for ... |
| **Reconstitution & Storage** | Purified |
| **Precautions** | Anti-PCNA Antibody (clone PC10) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | PCNA |
| **Function** | Confers DNA tethering and processivity to DNA polymerases and other proteins (PubMed:24695737, PubMed:24939902, PubMed:35585232). 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: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

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