

KD-Validated Anti-PCNA Mouse Monoclonal Antibody Mouse monoclonal antibody Catalog # AGI1783

Specification

KD-Validated Anti-PCNA Mouse Monoclonal Antibody - Product Information

Application Primary Accession Reactivity Clonality Isotype Calculated MW Gene Name Aliases WB P12004 Rat, Human, Mouse Monoclonal Mouse IgG1 kappa Predicted, 29 kDa , observed , 35 kDa KDa PCNA PCNA; Proliferating Cell Nuclear Antigen 2; Cyclin; DNA Polymerase Delta Auxiliary Protein; ATLD2 Recombinant protein of human PCNA

Immunogen

KD-Validated Anti-PCNA Mouse Monoclonal Antibody - Additional Information

Gene ID 5111 Other Names Proliferating cell nuclear antigen, PCNA, Cyclin, PCNA

KD-Validated Anti-PCNA Mouse Monoclonal Antibody - 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



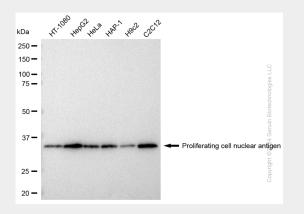
and BAZ1B/WSTF at replication foci during S phase (PubMed:15543136). Together with APEX2, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents

KD-Validated Anti-PCNA Mouse Monoclonal Antibody - Protocols

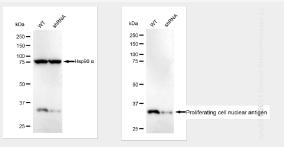
Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

KD-Validated Anti-PCNA Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-Proliferating cell nuclear antigen antibody (Cat#AGI1783). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Proliferating cell nuclear antigen antibody (Cat#AGI1783, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-Proliferating cell nuclear antigen antibody (Cat#AGI1783). Proliferating cell nuclear antigen expression in wild type (WT) and Proliferating cell nuclear antigen shRNA knockdown (KD) HeLa cells with 30 μ g of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Proliferating cell nuclear antigen antibody (Cat#AGI1783, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.