Anti-PCNA Mouse mAb

Purified Recombinant Mouse Monoclonal Antibody

Catalog # M014681

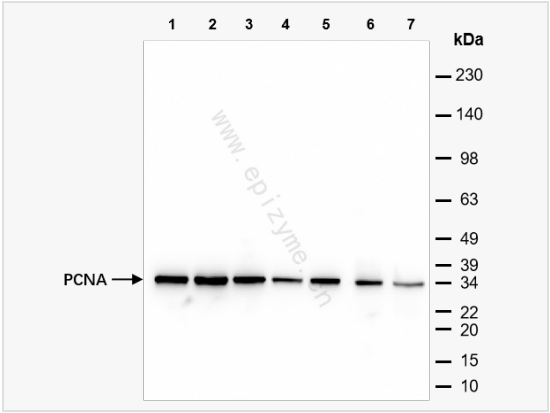
Product Information

Application	IF (Cell)/ICC, ELISA, WB, IHC-P/IF (Tissue-P)
Reactivity	Mouse (Cell), Rat, Human
Dilution	WB 1:1,000~1:2,000; IHC-P 1:100~1:200; IF 1:100~1:200
Host	Mouse
Clonality	Monoclonal
Clone No.	40Q92E40
Isotype	IgG
Label	Unconjugated
Immunogen	Recombinant protein of human PCNA
Format	Affinity purified monoclonal antibody supplied in PBS with 0.01% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-PCNA Mouse mAb [40Q92E40] is for research use only and not for use in diagnostic or therapeutic procedures.

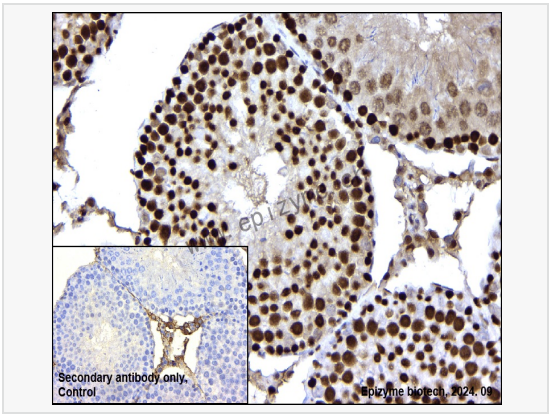
Protein Information

Synonyms	ATLD2, cb16, Cyclin, DNA polymerase delta auxiliary protein, etID36690.10, fa28e03, fb36g03, HGCN8729, MGC8367, Mutagen-sensitive 209 protein, OTTHUMP00000030189, OTTHUMP00000030190, PCNA, Pcna/cyclin, PCNA_HUMAN, PCNAR, Polymerase delta accessory protein, Proliferating cell nuclear antigen, wu:fa28e03, wu:fb36g03.
Calculated MW	Calculated MW: 28 kDa; Observed MW: 36 kDa
Uniprot ID	P12004
Gene ID	5111
Background	Auxiliary protein of DNA polymerase delta and is involved in the control of eukaryotic DNA replication by increasing the polymerase's processibility during elongation of the leading strand. 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. Forms nuclear foci representing sites of ongoing DNA replication and vary in morphology and number during S phase. Together with APEX2, is redistributed in discrete nuclear foci in presence of oxidative DNA damaging agents.

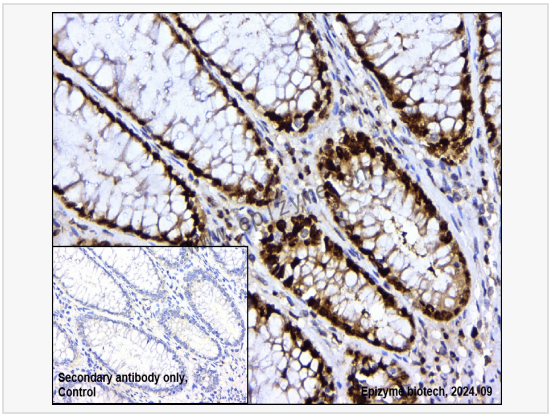
Validation Images



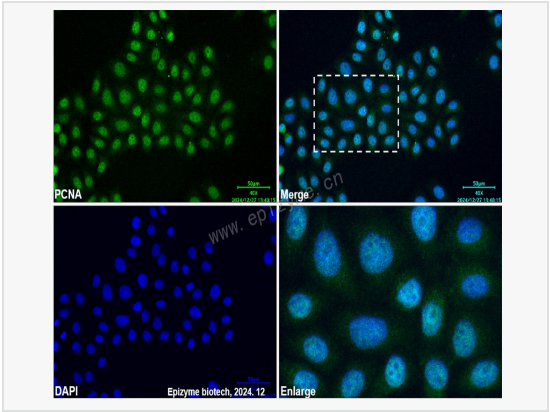
Western Blot - Anti-PCNA Mouse mAb [40Q92E40]
All lanes: M014681 at 1:2,000 dilution
Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2: Raw264.7 (Mouse mononuclear macrophage leukemia cell) whole cell lysates
Lane 3: C2C12 (Mouse myoblasts epithelial cell) whole cell lysates
Lane 4: U2OS (Human osteosarcoma epithelial cell) whole cell lysates
Lane 5: T24 (Human bladder cancer epithelial cell) whole cell lysates
Lane 6: Rat spleen whole tissue lysates
Lane 7: Mouse small intestine whole tissue lysates
Lysates/proteins at 10 µg per lane.
Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP Conjugated (Cat. No. LF101) at 1:5,000 dilution
Predicted band size: 28 kDa
Observed band size: 36 kDa
Developed using the ECL technique (Cat. No. SQ201).



Immunohistochemistry - Anti-PCNA Mouse mAb [40Q92E40]
Sample: Paraformaldehyde-fixed, paraffin embedded rat testis tissue
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins.
Primary antibody: M014681 at 1:200 dilution
Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP conjugated at 1:1,000 dilution
DAB was used as the chromogen.
Counter stained with hematoxylin.
Positive/negative staining were presented.
Only the secondary antibody was used as the negative control.



Immunohistochemistry - Anti-PCNA Mouse mAb [40Q92E40]
Sample: Paraformaldehyde-fixed, paraffin embedded human colonic cancer tissue
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins.
Primary antibody: M014681 at 1:200 dilution
Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP conjugated at 1:1,000 dilution
DAB was used as the chromogen.
Counter stained with hematoxylin.
Positive/negative staining were presented.
Only the secondary antibody was used as the negative control.



Immunofluorescence - Anti-PCNA Mouse mAb [40Q92E40]
Sample: HeLa cells
The cells were fixed with 4% paraformaldehyde (10 min), permeabilized with 0.5% Triton X-100 for 10 minutes and then blocked with 5% BSA in 0.1% PBS-Tween for 0.5 hours.
Primary antibody: M014681 at 1:100 dilution
Secondary antibody: Goat anti-Mouse (488) at 1:1,000 dilution (shown in green)
Nuclei were stained with DAPI (shown in blue).