

## ARG66388 anti-PCNA antibody [SQab18115]

Package: 100 µl  
Store at: -20°C

### Summary

Product Description	Recombinant Rabbit Monoclonal antibody [SQab18115] recognizes PCNA
Tested Reactivity	Hu, Ms, Rat, AGMK, Bov, Chk, Dog
Tested Application	FACS, IP, WB
Host	Rabbit
Clonality	Monoclonal
Clone	SQab18115
Isotype	IgG
Target Name	PCNA
Species	Human
Immunogen	Synthetic peptide corresponding to aa. 100-200 of Human PCNA.
Conjugation	Un-conjugated
Alternate Names	PCNA; ATLD2; Cyclin; Proliferating cell nuclear antigen

### Application Instructions

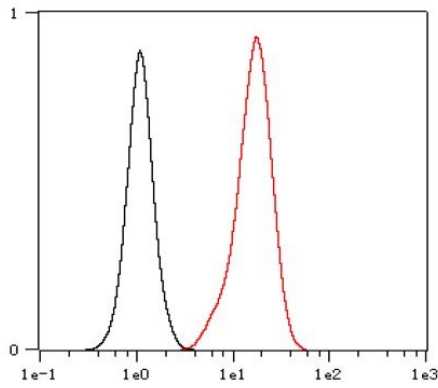
Application table	Application	Dilution
	FACS	1:800 - 1:2000
	IP	1:50
	WB	1:1000 - 1:2000

**Application Note** \* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

### Properties

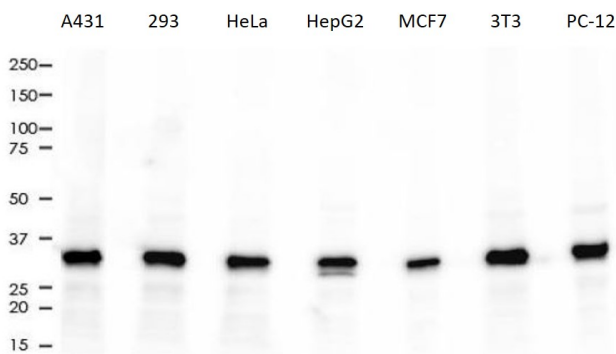
Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS, 0.01% Sodium azide, 40% Glycerol and 0.05% BSA.
Preservative	0.01% Sodium azide
Stabilizer	40% Glycerol and 0.05% BSA
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Gene Symbol	PCNA
Gene Full Name	proliferating cell nuclear antigen
Background	<p>The protein encoded by this gene is found in the nucleus and is a cofactor of DNA polymerase delta. The encoded protein acts as a homotrimer and helps increase the processivity of leading strand synthesis during DNA replication. In response to DNA damage, this protein is ubiquitinated and is involved in the RAD6-dependent DNA repair pathway. Two transcript variants encoding the same protein have been found for this gene. Pseudogenes of this gene have been described on chromosome 4 and on the X chromosome. [provided by RefSeq, Jul 2008]</p>
Function	<p>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-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. 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. [UniProt]</p>
Calculated Mw	29 kDa
PTM	<p>Phosphorylated. Phosphorylation at Tyr-211 by EGFR stabilizes chromatin-associated PCNA.</p> <p>Acetylated by CREBBP and p300/EP300; preferentially acetylated by CREBBP on Lys-80, Lys-13 and Lys-14 and on Lys-77 by p300/EP300 upon loading on chromatin in response to UV irradiation (PubMed:24939902, PubMed:19419956). Lysine acetylation disrupts association with chromatin, hence promoting PCNA ubiquitination and proteasomal degradation in response to UV damage in a CREBBP- and EP300-dependent manner (PubMed:24939902). Acetylation disrupts interaction with NUDT15 and promotes degradation (PubMed:19419956).</p> <p>Ubiquitinated (PubMed:24939902, PubMed:20227374). Following DNA damage, can be either monoubiquitinated to stimulate direct bypass of DNA lesions by specialized DNA polymerases or polyubiquitinated to promote recombination-dependent DNA synthesis across DNA lesions by template switching mechanisms. Following induction of replication stress, monoubiquitinated by the UBE2B-RAD18 complex on Lys-164, leading to recruit translesion (TLS) polymerases, which are able to synthesize across DNA lesions in a potentially error-prone manner. An error-free pathway also exists and requires non-canonical polyubiquitination on Lys-164 through 'Lys-63' linkage of ubiquitin moieties by the E2 complex UBE2N-UBE2V2 and the E3 ligases, HLTF, RNF8 and SHPRH. This error-free pathway, also known as template switching, employs recombination mechanisms to synthesize across the lesion, using as a template the undamaged, newly synthesized strand of the sister chromatid. Monoubiquitination at Lys-164 also takes place in undamaged proliferating cells, and is mediated by the DCX(DTL) complex, leading to enhance PCNA-dependent translesion DNA synthesis. Sumoylated during S phase.</p> <p>Methylated on glutamate residues by ARMT1/C6orf211. [UniProt]</p>



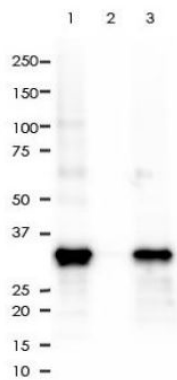
ARG66388 anti-PCNA antibody [SQab18115] FACS image

Flow Cytometry: HeLa cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% TritonX-100 for 15 min. The cells were then stained with ARG66388 anti-PCNA antibody [SQab18115] (red) at 1:2000 dilution in 1x PBS/1% BSA for 30 min at room temperature, followed by Alexa Fluor® 488 labelled secondary antibody. Unlabelled sample (black) was used as a control.



ARG66388 anti-PCNA antibody [SQab18115] WB image

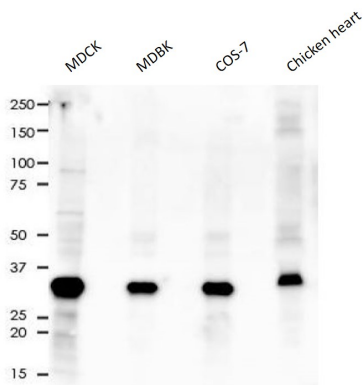
Western blot: 10 µg of A431, 293, HeLa, HepG2, MCF7, 3T3 and PC-12 cell lysates stained with ARG66388 anti-PCNA antibody [SQab18115] at 1:2000 dilution.



ARG66388 anti-PCNA antibody [SQab18115] IP image

Immunoprecipitation: 0.4 mg of HeLa whole cell lysate was immunoprecipitated (1:50 dilution) and stained with ARG66388 anti-PCNA antibody [SQab18115].

Lane 1: Immunoprecipitation in HeLa whole cell lysate  
 Lane 2: PBS instead of Primary Ab in HeLa whole cell lysate  
 Lane 3: HeLa whole cell lysate, 10 µg (input)



ARG66388 anti-PCNA antibody [SQab18115] WB image

Western blot: 10 µg of MDCK, MDBK, COS-7 and Chicken heart lysates stained with ARG66388 anti-PCNA antibody [SQab18115] at 1:2000 dilution.