ARG65619
anti-PCNA antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Goat Polyclonal antibody recognizes PCNA
Tested Reactivity	Hu, Ms, Rat, Pig
Predict Reactivity	Cow, Dog
Tested Application	WB
Host	Goat
Clonality	Polyclonal
Target Name	PCNA
Species	Human
Immunogen	Synthetic peptide around the center region of Human PCNA (C-NGNIKLSQTSNVD)
Conjugation	Un-conjugated
Alternate Names	PCNA; ATLD2; Cyclin; Proliferating cell nuclear antigen

Application Instructions

Application table

Application	Dilution
WB	0.01 - 0.03 µg/ml

Application Note

WB: Recommend incubate at RT for 1h.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

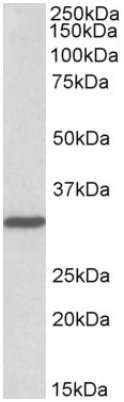
Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	Tris saline (pH 7.3), 0.02% Sodium azide and 0.5% BSA
Preservative	0.02% Sodium azide
Stabilizer	0.5% BSA
Concentration	0.5 mg/ml
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 or below. 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.

Bioinformation

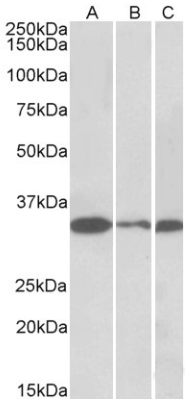
Gene Symbol	PCNA
Gene Full Name	proliferating cell nuclear antigen
Background	The protein encoded by this gene is found in the nucleus and is a cofactor of DNA polymerase delta. The encoded protein acts as a homotrimer and helps increase the processivity of leading strand synthesis during DNA replication. 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]
Function	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.
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Controls and Markers antibody; Gene Regulation antibody
Calculated Mw	29 kDa
PTM	Phosphorylated. Phosphorylation at Tyr-211 by EGFR stabilizes chromatin-associated PCNA. 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). 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. Methylated on glutamate residues by ARMT1/C6orf211.

Images



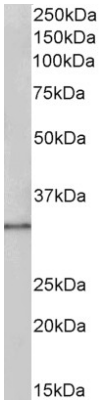
ARG65619 anti-PCNA antibody WB image

Western blot: 35 µg of HeLa lysate stained with ARG65619 anti-PCNA antibody at 0.01 µg/ml dilution (1h incubation).



ARG65619 anti-PCNA antibody WB image

Western blot: 35 µg of (A) NIH3T3, (B) Mouse Testis and (C) Rat Testis lysates stained with ARG65619 anti-PCNA antibody at 0.01 µg/ml dilution (1h incubation).



ARG65619 anti-PCNA antibody WB image

Western blot: 35 µg of Pig Spleen lysate stained with ARG65619 anti-PCNA antibody at 0.03 µg/ml dilution (1h incubation).