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antibody and ELISA experts

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Anti-PCNA Antibody Picoband®

Catalog Number: A00125

About PCNA

Proliferating cell nuclear antigen (PCNA) is a DNA clamp that acts as a processivity factor for DNA polymerase delta in eukaryotic cells and is essential for replication. It is mapped to 20p12.3. 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.

Overview

Product Name	Anti-PCNA Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-PCNA Antibody Picoband® catalog # A00125. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P12004

Technical Details

Immunogen	E.coli-derived human PCNA recombinant protein (Position: M1-S261).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human ELISA, 0.1-0.5ug/ml, -

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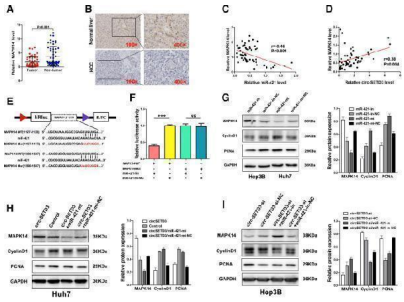
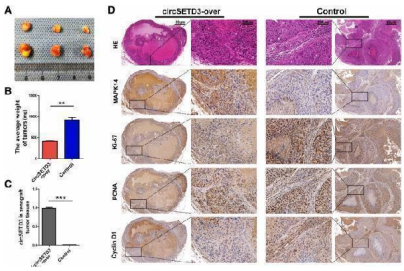
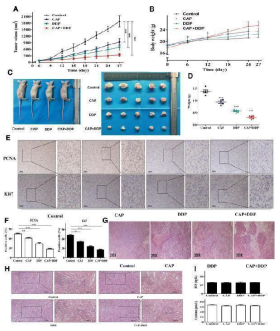
Anti-PCNA Antibody Picoband® (A00125) Images



CircSETD3 inhibits the growth of HCC through thecircSETD3/miR-421/MAPK14 pathway. a and b Both qRT-PCR and IHC showed MAPK14 was significantly downregulated in HCC tissues compared with matched non-tumorous tissues. c and d MAPK14 negatively correlated with miR-421 whereas positively correlated with circSETD3 in HCC tissues. e Schematic of MAPK14 wild-type (WT) and mutant (Mut) luciferase reporter vectors. f The relative luciferase activities were analyzed in 293 T cells co-transfected with miR-421 mimics or miR-mimics-NC and WT or Mut luciferase reporter vectors. g MiR-421 inhibitor up-regulated MAPK14 and down-regulated cyclinD1 and PCNA in Hep3B cells. MiR-421 mimics down-regulated MAPK14 and up-regulated cyclinD1 and PCNA in Huh7 cells. h CircSETD3 letivirus up-regulated MAPK14 and down-regulated cyclinD1 and PCNA in Huh7 cells, this effect could be reversed by co-transfected with miR-421 mimics. i circSETD3 siRNA down-regulated MAPK14 and up-regulated cyclinD1 and PCNA in Hep3B cells, this effect can be reversed by co-transfected with miR-421 inhibitors. HCC, hepatocellular carcinoma; qRT-PCR, quantitative reverse transcription polymerase chain reaction; in, inhibitors; mi, mimics; IHC, immunohistochemistry. ***P<0.001. Error bars indicate SD Index in PubMed under a CC BY license. PMID: 30795787



CircSETD3 stably maintained in xenograft tumor models and inhibit tumor growth by targeting MAPK14. a and b Smaller tumor size and lower tumor weight were observed in circSETD3-overexpressing group. c Over-expressed circSETD3 could stably maintained in xenograft tumor models. d The expression of MAPK14 was increased, Ki-67, PCNA and Cyclin D1 were decreased in circSETD3-overexpressing group when compared with control group. **P<0.01, ***P<0.001. Error bars indicate SD Index in PubMed under a CC BY license. PMID: 30795787



Effects of each treatment on the growth of human OS xenograft tumors. Nude mice bearing 143 human OS xenograft tumors were treated with CAP (20 mg/kg) and DDP (4 mg/kg) alone or in combination. The volumes of the xenograft tumors were measured at the indicated time points (a). The weight of each nude was measured at the indicated time points (b). After the last treatment, the mice were sacrificed, and representative images of the subcutaneous tumor xenografts in the nude mice and the morphology of the tumors are presented (c). Tumors were collected, and the tumor weights were measured and compared (d). Xenograft tumors were sectioned and stained with PCNA and Ki67 via IHC (e). Statistical analyses of the expression of PCNA and Ki67 in different groups (f). Tumors were sectioned and stained with H&E, and representative histopathological images are presented (g). Effects of the different treatments on renal histology.

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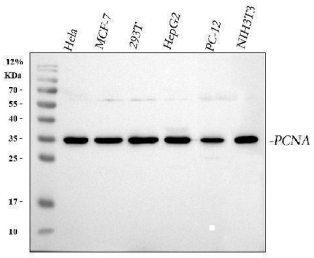
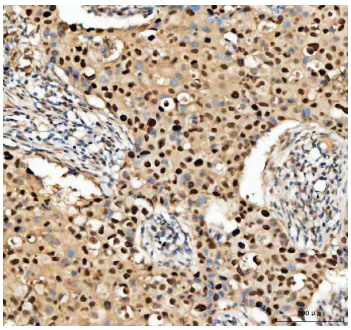
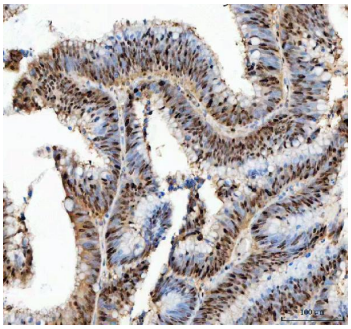
Representative histological profiles of kidneys after the different treatments were detected by H&E staining (h). Effects of the different treatments on BUN and creatinine levels in mice (i). The quantitative data are shown as the mean ± SD of 5 independent experiments; * p



Western blot analysis of PCNA using anti-PCNA antibody (A00125). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human HepG2 whole cell lysates, Lane 5: rat PC-12 whole cell lysates, Lane 6: mouse NIH/3T3 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PCNA antigen affinity purified polyclonal antibody (Catalog # A00125) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for PCNA at approximately 36 kDa. The expected band size for PCNA is at 29 kDa.



IHC analysis of PCNA using anti-PCNA antibody (A00125). PCNA was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PCNA Antibody (A00125) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of PCNA using anti-PCNA antibody (A00125). PCNA was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PCNA Antibody (A00125) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IHC analysis of PCNA using anti-PCNA antibody (A00125).

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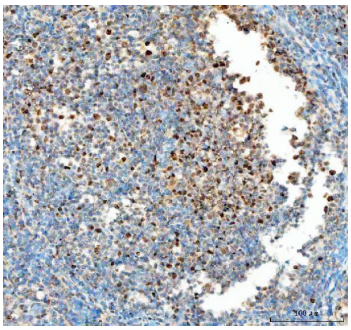
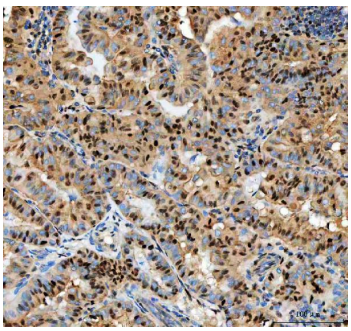
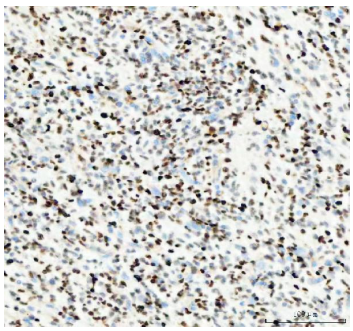


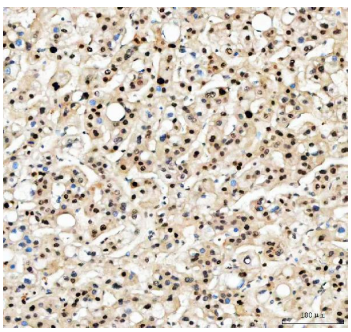
PCNA was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PCNA Antibody (A00125) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of PCNA using anti-PCNA antibody (A00125). PCNA was detected in a paraffin-embedded section of human papillary thyroid carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PCNA Antibody (A00125) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of PCNA using anti-PCNA antibody (A00125). PCNA was detected in a paraffin-embedded section of human glioblastoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PCNA Antibody (A00125) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of PCNA using anti-PCNA antibody (A00125). PCNA was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PCNA Antibody (A00125) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IHC analysis of PCNA using anti-PCNA antibody (A00125). PCNA was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue

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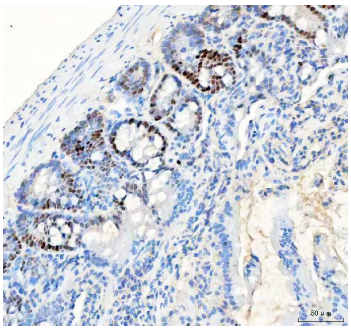
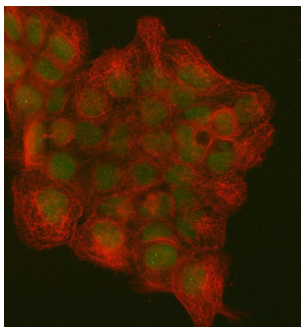
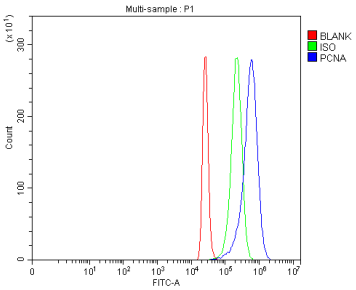


section was then incubated with 2 ug/ml rabbit anti-PCNA Antibody (A00125) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IF analysis of PCNA using anti-PCNA antibody (A00125) and anti-Beta Tubulin antibody (M01857-3). PCNA was detected in immunocytochemical section of A431 cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-PCNA Antibody (A00125) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) and Cy3 Conjugated Goat Anti-Mouse IgG (BA1031) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of 293T cells using anti-PCNA antibody (A00125). Overlay histogram showing 293T cells stained with A00125 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PCNA Antibody (A00125, 1 ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

60 Publications Citing This Product

1. PubMed ID: 10.24272/j.issn.2095-8137.2020.375, LIN28A inhibits DUSP family phosphatases and activates MAPK signaling pathway to maintain pluripotency in porcine induced pluripotent stem cells

2. PubMed ID: 10.1186/1756-9966-27-60, Thalidomide influences growth and vasculogenic mimicry channel formation in melanoma

3. PubMed ID: 10.2147/CMAR.S302084, Grape Seed Proanthocyanidins (GSPs) Inhibit the Development of Cutaneous Squamous Cell Carcinoma by Regulating the hsa_circ_0070934/miR-136-5p/PRAF2 Axis

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Anti-PCNA Antibody

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