

## Anti-PCNA Antibody Picoband™ (monoclonal, 2G2)

Catalog Number: M00125-3

### 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™ (monoclonal, 2G2)                                                                                                                                                    |
| Reactive Species     | Human, Mouse, Rat                                                                                                                                                                                 |
| Description          | Boster Bio Anti-PCNA Antibody Picoband™ (monoclonal, 2G2) catalog # M00125-3. Tested in FCM, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.                          |
| Application          | Flow Cytometry, IF, IHC, ICC, WB                                                                                                                                                                  |
| Clonality            | Monoclonal 2G2                                                                                                                                                                                    |
| Formulation          | Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .                                                                                                      |
| Storage Instructions | 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 freezing and thawing. |
| Host                 | Mouse                                                                                                                                                                                             |
| Uniprot ID           | P12004                                                                                                                                                                                            |

### Technical Details

|                               |                                                                                                                                                                                        |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Immunogen                     | E.coli-derived human PCNA recombinant protein (Position: M1-S261).                                                                                                                     |
| Predicted Reactive Species    | Hepatitis Virus                                                                                                                                                                        |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC. |
| Cross Reactivity              | No cross-reactivity with other proteins.                                                                                                                                               |
| Isotype                       | Mouse IgG2b                                                                                                                                                                            |
| Form                          | Lyophilized                                                                                                                                                                            |
| Concentration                 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.                                                                                                              |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purification        | Immunogen affinity purified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Suggested Dilutions | <p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat</p> <p>Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Mouse, Rat</p> <p>Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human</p> <p>Flow Cytometry, 1-3 ug/1x<sup>6</sup> cells, Human</p> |

## Anti-PCNA Antibody Picoband™ (monoclonal, 2G2) (M00125-3) Images

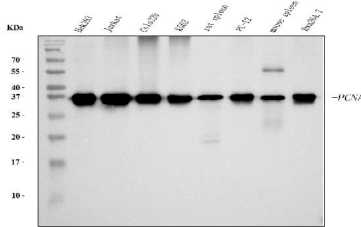


Figure 1. Western blot analysis of PCNA using anti-PCNA antibody (M00125-3).

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 HEK293 whole cell lysates,

Lane 2: human Jurkat whole cell lysates,

Lane 3: human Colo320 whole cell lysates,

Lane 4: human K562 whole cell lysates,

Lane 5: rat spleen tissue lysates,

Lane 6: rat PC-12 whole cell lysates,

Lane 7: mouse spleen tissue lysates,

Lane 8: mouse RAW264.7 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 mouse anti-PCNA antigen affinity purified monoclonal antibody (Catalog # M00125-3) 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-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for PCNA at approximately 36 kDa. The expected band size for PCNA is at 36 kDa.

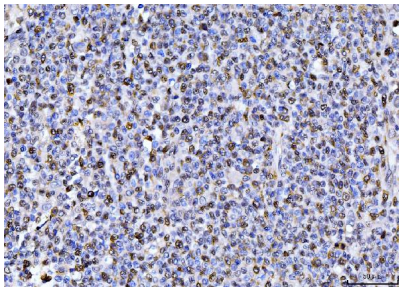


Figure 2. IHC analysis of PCNA using anti-PCNA antibody (M00125-3).

PCNA was detected in a paraffin-embedded section of human lymphadenoma 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 mouse anti-PCNA Antibody (M00125-3) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

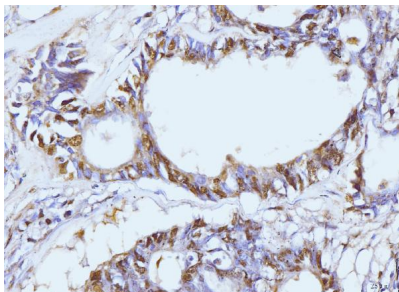


Figure 3. IHC analysis of PCNA using anti-PCNA antibody (M00125-3).

PCNA was detected in a paraffin-embedded section of human colonic 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 mouse anti-PCNA Antibody (M00125-3) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-

Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

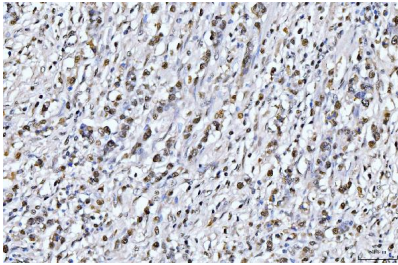


Figure 4. IHC analysis of PCNA using anti-PCNA antibody (M00125-3). PCNA was detected in a paraffin-embedded section of human gastric cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-PCNA Antibody (M00125-3) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

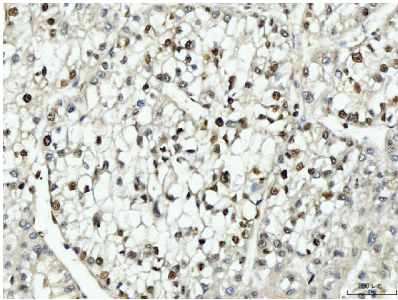


Figure 5. IHC analysis of PCNA using anti-PCNA antibody (M00125-3). PCNA was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-PCNA Antibody (M00125-3) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

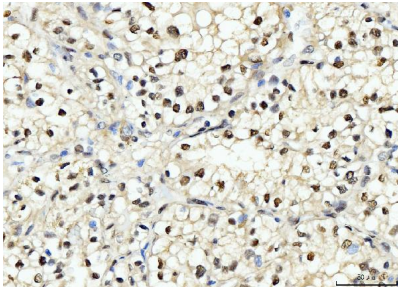


Figure 6. IHC analysis of PCNA using anti-PCNA antibody (M00125-3). PCNA was detected in a paraffin-embedded section of human renal clear cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-PCNA Antibody (M00125-3) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

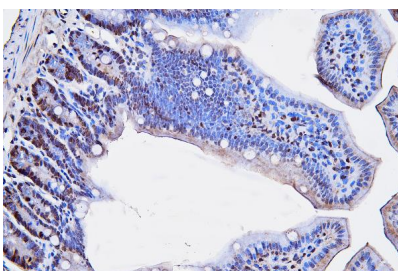


Figure 7. IHC analysis of PCNA using anti-PCNA antibody (M00125-3). PCNA was detected in a paraffin-embedded section of mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml mouse anti-PCNA Antibody (M00125-3) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

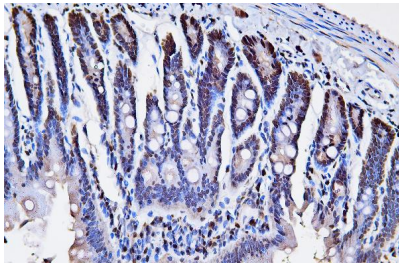


Figure 8. IHC analysis of PCNA using anti-PCNA antibody (M00125-3).

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 section was then incubated with 2 ug/ml mouse anti-PCNA Antibody (M00125-3) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

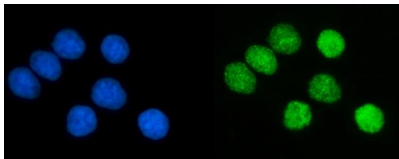


Figure 9. IF analysis of PCNA using anti-PCNA antibody (M00125-3).

PCNA was detected in an immunocytochemical section of HEP3B cells. 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 mouse anti-PCNA Antibody (M00125-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

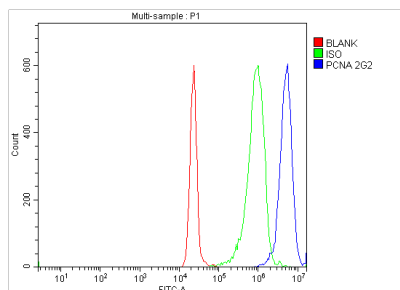


Figure 10. Flow Cytometry analysis of JK cells using anti-PCNA antibody (M00125-3).

Overlay histogram showing JK cells stained with M00125-3 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-PCNA Antibody (M00125-3, 1 ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

## 24 Publications Citing This Product

1. PubMed ID: 10.3892/or.16.5.1021, Histological type of oncogenity and expression of cell cycle genes in tumor cells from human mesenchymal stem cells
2. PubMed ID: 10.3892/ol.2014.1803, Abscopal antitumor immune effects of magnet<sup>®</sup>mediated hyperthermia at a high therapeutic temperature on Walker<sup>®</sup>256 carcinosarcomas in rats
3. PubMed ID: 10.1039/C5RA22371G, Reparative activity of costunolide and dehydrocostus in a mouse model of 5-fluorouracil-induced intestinal mucositis

Visit [bosterbio.com/anti-pcna-picoband-trade-antibody-m00125-3-boster.html](http://bosterbio.com/anti-pcna-picoband-trade-antibody-m00125-3-boster.html) to see all 24 publications.

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