

# Monoclonal Antibody Anti-PCNA

PN IM1510 – Purified – Liquid 0.1 mg – Clone 5A10

For Research Use Only. Not for use in diagnostic procedures.

## SPECIFICITY

The molecular weight of the recognized antigen is 36 kDa.

The 5A10 monoclonal antibody (mAb) reacts with human Proliferating Cell Nuclear Antigen (PCNA)/cyclin, a stable nuclear cell cycle-related protein (1–3). PCNA level increases two to three times between early G1 and early S phases, becomes maximal during S phase and declines during G2 and M phases. More recently, studies have revealed PCNA's striking ability to interact with multiple partners, which are involved in several metabolic pathways, including Okazaki fragment processing, DNA repair, translesion DNA synthesis, DNA methylation, chromatin remodeling and cell cycle regulation (4).

The 5A10 mAb also recognizes rat PCNA.

## REAGENT

Monoclonal Antibody Anti-PCNA  
PN IM1510 – Purified – Liquid – 0.1 mg

<b>Clone</b>	5A10
<b>Isotype</b>	IgG1
<b>Immunogen</b>	Recombinant rat PCNA
<b>Hybridoma</b>	P3U1 x Balb/c
<b>Species</b>	Mouse
<b>Source</b>	Ascite
<b>Purification</b>	Ammonium sulfate precipitation and affinity chromatography on protein A.

## REAGENT CONTENTS

100 µg of IgG in 100 µL of Phosphate-buffered saline containing 50 % glycerol, pH 7.2.

## STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.

2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Avoid microbial contamination of reagent or erroneous results may occur.
5. Use general good laboratory practices when handling this reagent.

## STORAGE CONDITIONS AND STABILITY

The purified liquid form may be stored at -20°C until the expiration date stated on the vial label.

No preservative has been added.

## REAGENT PREPARATION

No reconstitution is necessary.

## APPLICATION

Cell proliferation analysis and Ki-67 studies (5).

Flow cytometry, Immunoblotting.

This antibody is suitable for frozen or paraffin-embedded tissue sections.

## SUGGESTED PROCEDURE

Immunohistochemistry:

A concentration of 2 µg/mL is recommended.

Immunoblotting:

A concentration of 5 µg/mL is recommended.

Flow cytometry: 10 – 50 µg/mL

For each application, it is recommended to establish the right range of antibody dilutions to be used for the experiment.

## SELECTED RESEARCH REFERENCES

1. Miyachi, K., Fritzler, M.J., Tan, E.M., "Autoantibody to a nuclear antigen in proliferating cells" 1978, Journal of Immunology, 121, 2228-2234.

2. Prelich, G., Kostura, M., Marshak, D.R., Mathews, M.B. Stillman, B., "The cell-cycle regulated proliferating cell nuclear antigen is required for SV40 DNA replication in vitro", 1987, Nature, 326, 471-475.
3. Matsumoto, K., Moriuchi, T., Koji, T., Nakane, P.K., "Molecular cloning of cDNA coding for rat proliferating cell nuclear antigen (PCNA)/cyclin", 1987, EMBO J., 6, 637-642.
4. Landberg, G. Roos, G., "Antibodies to proliferating cell nuclear antigen as S-Phase probe in flow cytometry cell cycle analysis" 1991, Cancer research, 51, 4570-4574.
5. Maga, G., Hubscher, U.J., "Proliferating cell nuclear antigen (PCNA): a dancer with many partners", 2003, J. of Cell Sci, 116, 3051-3060.

## PRODUCT AVAILABILITY

Monoclonal Antibody Anti-PCNA  
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For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

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