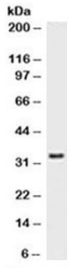
PCNA Antibody [clone PC10] (V2218)

Catalog No.	Formulation	Size
V2218-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2218-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2218SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2218IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

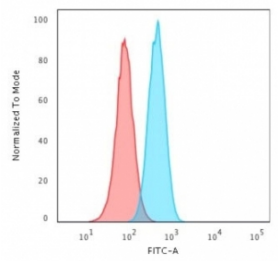
Citations (11)

Bulk quote request

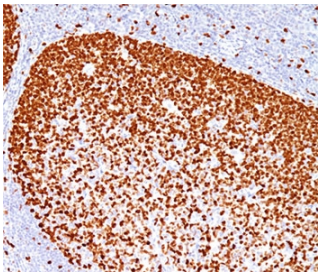
Species Reactivity	Human, Mouse, Rat
Format	Purified
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	PC10
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	5111
Localization	Predominantly nuclear, some cytoplasmic
Applications	Flow Cytometry : 1-2ug/10^6 cells Immunofluorescence : 0.5-1ug/ml Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 0.25-0.5ug/ml for 30 min at RT
Limitations	This **PCNA antibody** is available for research use only.



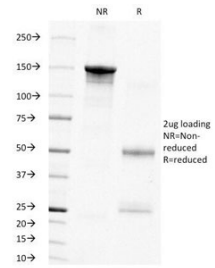
Western blot testing of HeLa cell lysate with PCNA antibody (clone PC10). Predicted molecular weight ~29 kDa, routinely observed at 29~36 kDa.



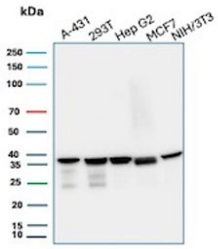
Flow cytometry staining of human A549 cells with PCNA antibody; Red=isotype control, Blue= PCNA antibody.



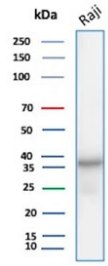
IHC testing of human human tonsil stained with PCNA antibody (PC10).



SDS-PAGE analysis of purified, BSA-free PCNA antibody (clone PC10) as confirmation of integrity and purity.



Western blot testing of human A431, 293T, HepG2 and MCF7 cell lysate and mouse NIH 3T3 cell lysate with PCNA antibody. Predicted molecular weight ~29 kDa, routinely observed at 29~36 kDa.



Western blot testing of human Raji cell lysate with PCNA antibody. Predicted molecular weight ~29 kDa, routinely observed at 29~36 kDa.

Description

PCNA antibody clone PC10 is a monoclonal antibody directed against proliferating cell nuclear antigen, a nuclear protein that functions as a sliding clamp for DNA polymerase during replication and repair. PCNA is essential for DNA synthesis, cell cycle progression, and the maintenance of genomic stability. Because of its strong correlation with cellular proliferation, PCNA is widely used as a biomarker for dividing cells in both normal and pathological contexts. NSJ Bioreagents provides PCNA antibody clone PC10 as a trusted tool for research into cell cycle regulation, cancer biology, and DNA repair mechanisms.

PCNA antibody clone PC10 produces intense nuclear staining in cells undergoing active DNA replication. Its expression peaks during the S phase of the cell cycle, making it a reliable indicator of proliferative activity. Researchers use clone PC10 to measure cell growth rates in cultured cells, tissues, and tumor samples, enabling quantification of proliferative indices.

In cancer biology, PCNA antibody clone PC10 has become a standard marker for assessing tumor aggressiveness. High PCNA expression often correlates with increased proliferation and poor prognosis in malignancies such as breast, colon, lung, and brain cancers. This antibody is commonly included in diagnostic and experimental panels to evaluate tumor biology and to study the effects of therapeutic interventions that target cell cycle progression.

PCNA also plays an important role in DNA repair pathways. PCNA antibody clone PC10 has been used in studies of mismatch repair, nucleotide excision repair, and base excision repair, where PCNA serves as a platform for recruiting repair enzymes. Detection of PCNA in cells exposed to DNA damaging agents has provided insights into how cells respond to genotoxic stress.

In developmental biology, PCNA antibody clone PC10 is applied to track proliferative activity in embryonic tissues, where cell division drives organogenesis and tissue growth. This application underscores the antibodyâ€™s versatility across multiple fields of biology.

Validated for multiple experimental approaches, PCNA antibody clone PC10 consistently provides clear nuclear signals with minimal background. It has been extensively cited in publications spanning oncology, developmental biology, and DNA repair. Alternate names include proliferating cell nuclear antigen antibody, cyclin antibody, and DNA replication clamp antibody.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the antibody to be titered up or down for optimal performance.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Rat PCNA / Protein A fusion protein was used as the immunogen for this antibody.

Storage

Store the PCNA antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

References (3)