SANTA CRUZ BIOTECHNOLOGY, INC.

PCNA (PC10): sc-56

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The proliferating cell nuclear antigen (PCNA), a protein synthesized in early G_1 and S phases of the cell cycle, functions in cell cycle progression, DNA replication and DNA repair. In early S phase, PCNA exhibits granular distribution and is absent from the nucleoli, however, in late S phase, it relocates to the nucleoli. PCNA exists in two basic forms: one involved in ongoing DNA replication, which localizes specifically to the nucleus, and a second, soluble form, not implicated in constant synthesis. Interestingly, the latter form degrades in the presence of organic solvents, rendering it undetectable by histological methods in tissues using organic fixatives, and thus also providing a method of visualizing only the synthesizing form.

CHROMOSOMAL LOCATION

Genetic locus: PCNA (human) mapping to 20p13; Pcna (mouse) mapping to 2 F2.

SOURCE

PCNA (PC10) is a mouse monoclonal antibody raised against PCNA made in the protein A expression vector pR1T2T of rat origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PCNA (PC10) is available conjugated to agarose (sc-56 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56 PE), fluorescein (sc-56 FITC), Alexa Fluor® 488 (sc-56 AF488), Alexa Fluor® 546 (sc-56 AF546), Alexa Fluor® 594 (sc-56 AF594) or Alexa Fluor® 647 (sc-56 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56 AF680) or Alexa Fluor® 790 (sc-56 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, PCNA (PC10) is available conjugated to biotin (sc-56 B), 200 µg/ml, for WB, IHC(P) and ELISA; and to either TRITC (sc-56 TRITC, 200 µg/ml), PerCP (sc-56 PerCP), PerCP-Cy5.5 (sc-56 PCPC5) or Alexa Fluor® 405 (sc-56 AF405), 100 tests in 2 ml, for IF, IHC(P) and FCM.

APPLICATIONS

PCNA (PC10) is recommended for detection of PCNA p36 protein expressed at high levels in proliferating cells of mouse, rat, human, insect and *S. pombe* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

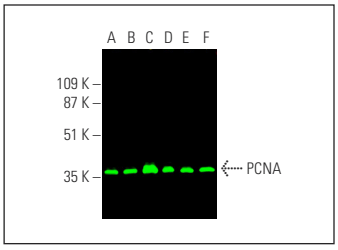
Suitable for use as control antibody for PCNA siRNA (h): sc-29440, PCNA siRNA (m): sc-29441, PCNA shRNA Plasmid (h): sc-29440-SH, PCNA shRNA Plasmid (m): sc-29441-SH, PCNA shRNA (h) Lentiviral Particles: sc-29440-V and PCNA shRNA (m) Lentiviral Particles: sc-29441-V.

Molecular Weight of PCNA: 36 kDa.

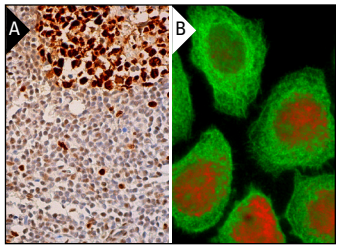
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



PCNA (PC10): sc-56 AF680. Near-infrared western blot analysis of PCNA expression in Raji (**A**), HCT-116 (**B**), MOLT-4 (**C**), HeLa (**D**), NIH/3T3 (**E**) and C6 (**F**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



PCNA (PC10): sc-56. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing nuclear staining of cells in germinal center and cells in non-germinal center (**A**). PCNA (PC10) PE: sc-56 PE and α Tubulin (TU-02) FITC: sc-8035 FITC. Direct immunofluorescence staining of formalin-fixed HeLa cells showing nuclear (red) and cytoskeletal (green) localization (**B**).

SELECT PRODUCT CITATIONS

1. Kelley, A.C. and Schmidt, R.M. 1988. The demographic transition and population policy in Egypt. Res. Popul. Econ. 6: 69-110.
2. Facina, C.H., et al. 2018. Long-term oral exposure to safe dose of bisphenol A in association with high-fat diet stimulate the prostatic lesions in a rodent model for prostate cancer. Prostate 78: 152-163.
3. Tusi, B.K., et al. 2018. Population snapshots predict early haematopoietic and erythroid hierarchies. Nature 555: 54-60.
4. Parrales, A., et al. 2018. Comparative oncology approach to drug repurposing in osteosarcoma. PLoS ONE 13: e0194224.
5. Choi, E.H., et al. 2018. Combined ectopic expression of homologous recombination factors promotes embryonic stem cell differentiation. Mol. Ther. 26: 1154-1165.
6. Kim, M.J., et al. 2018. Delivery of exogenous mitochondria via centrifugation enhances cellular metabolic function. Sci. Rep. 8: 3330.
7. Kottemann, M.C., et al. 2018. Removal of RTF2 from stalled replisomes promotes maintenance of genome integrity. Mol. Cell 69: 24-35.
8. Murai, J., et al. 2018. SLFN11 blocks stressed replication forks independently of ATR. Mol. Cell 69: 371-384.
9. Margalef, P., et al. 2018. Stabilization of reversed replication forks by telomerase drives telomere catastrophe. Cell 172: 439-453.
10. Zhou, D., et al. 2018. Fibroblast-specific β-catenin signaling dictates the outcome of AKI. J. Am. Soc. Nephrol. 29: 1257-1271.
11. Moon, Y.S., et al. 2018. Therapeutic effect of microcurrent on calf muscle atrophy in immobilized rabbit. Muscle Nerve 58: 270-276.

RESEARCH USE

For research use only, not for use in diagnostic procedures.