PCNA (SPM350): sc-65598

**BACKGROUND**

The proliferating cell nuclear antigen (PCNA), a protein synthesized in early G1 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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

PCNA (SPM350) is a mouse monoclonal antibody raised against recombinant PCNA protein of rat origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**STORAGE**

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

**APPLICATIONS**

PCNA (SPM350) is recommended for detection of PCNA of mouse, rat, human, insect and *Schizosaccharomyces 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 10⁶ 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.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or PCNA (h): 293T Lysate: sc-2203. Suitable for use only, not for use in diagnostic procedures.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2035 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-29491 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

PCNA (SPM350): sc-65598. Western blot analysis of PCNA expression in A-431 (A, NIH/3T3 (B), MCF-7(C) and HeLa (D) whole cell lysates and Hep G2 (E) and HeLa (F) nuclear extracts.

PCNA (SPM350): sc-65598. Western blot analysis of human PCNA transfected: sc-159920 (B) 293T whole cell lysates.

**RESEARCH USE**

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

**CONJUGATES**

See PCNA (PC10): sc-56 for PCNA antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.