SANTA CRUZ BIOTECHNOLOGY, INC.

PCNA (aM-13): sc-34005

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.

REFERENCES

1. Bravo, R., et al. 1987. Existence of two populations of cyclin/proliferating cell nuclear antigen during the cell cycle: association with DNA replication sites. J. Cell Biol. 105: 1549-1554.
2. Woods, A.L., et al. 1991. The assessment of proliferating cell nuclear antigen (PCNA) immunostaining in primary gastrointestinal lymphomas and its relationship to histological grade, S + G_2 + M phase fraction (flow cytometric analysis) and prognosis. Histopathology 19: 21-27.
3. Hong, R., et al. 2003. The human proliferating cell nuclear antigen regulates transcriptional coactivator p300 activity and promotes transcriptional repression. J. Biol. Chem. 278: 44505-44513.
4. Baida, A., et al. 2003. Germline mutations at microsatellite loci in homozygous and heterozygous mutants for mismatch repair and PCNA genes in *Drosophila*. DNA Repair 2: 827-833.
5. Thacker, S.A., et al. 2003. The contribution of E2F-regulated transcription to *Drosophila* PCNA gene function. Curr. Biol.13: 53-58.

SOURCE

PCNA (aM-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PCNA of *Arabidopsis thaliana* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-34005 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

PCNA (aM-13) is recommended for detection of PCNA of *Arabidopsis thaliana, Nicotiana tabacum, Lycopersicon esculentum, Zea mays and Pisum sativum* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of PCNA: 36 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.