

# Recombinant Human Proliferating Cell Nuclear Antigen

Cat. No. PCNA-174H Lot. No. (See product label)

## SPECIFICATION

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b>        | Recombinant human proliferating cell nuclear antigen produced in SF9 is a glycosylated, polypeptide chain. The recombinant human proliferating cell nuclear antigen has a molecular mass of 29,794 Dalton. The recombinant human proliferating cell nuclear antigen is purified by proprietary chromatographic techniques.                                                                                                                                                                                                                                                                                                                                                       |
| <b>Species</b>                 | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Source</b>                  | Sf9 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>             | Proliferating cell nuclear antigen (PCNA), a protein of 30 kDa molecular weight also known as cyclin, forms a trimer ring around a DNA double-helix. It binds to a variety of other nuclear proteins and thereby organises biochemical processes at the DNA replication fork. PCNA thereby assumes important functions in DNA synthesis, repair and processing, the regulation of cell cycle and even apoptosis. Anti-PCNA antibodies occur in systemic lupus, where they represent a rare specificity (< 10% of SLE patients). However, their presence alone or in combination with other autoantibodies should alert the clinician to the presence of defined or evolving SLE. |
| <b>Formulation</b>             | Recombinant Human PCNA is supplied at a of 1mg/ml in 16mM HEPES buffer pH-8, 400mM NaCl, and 20% glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Immunological Functions</b> | 1. Binds IgG-type human auto-antibodies. 2. Standard ELISA test (checker-board analysis of positive/negative sera panels, immuno-dot analysis with validated SLE patient sera.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                              |                                                                                                                                                  |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>                | Greater than 90% (SDS-PAGE).                                                                                                                     |
| <b>Applications</b>          | Western-Blot with monoclonal anti-hexa-His-tag antibody & Scleroderma patient sera.                                                              |
| <b>Coating Concentration</b> | 0.5-1.1g/ml (depending on the type of ELISA plate and coating buffer). Suitable for biotinylation and iodination.                                |
| <b>Storage Conditions</b>    | Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Avoid multiple freeze-thaw cycles. |

## GENE INFORMATION

|                            |                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>           | PCNA proliferating cell nuclear antigen [ Homo sapiens ]                                                                                    |
| <b>Synonyms</b>            | MGC8367; PCNA;Proliferating cell nuclear antigen; Cyclin;proliferating cell nuclear antigen; cyclin; DNA polymerase delta auxiliary protein |
| <b>Gene ID</b>             | 5111                                                                                                                                        |
| <b>mRNA Refseq</b>         | NM_002592                                                                                                                                   |
| <b>Protein Refseq</b>      | NP_002583                                                                                                                                   |
| <b>MIM</b>                 | 176740                                                                                                                                      |
| <b>UniProt ID</b>          | P12004                                                                                                                                      |
| <b>Chromosome Location</b> | 20pter-p12                                                                                                                                  |
| <b>Pathway</b>             | Base excision repair; Cell cycle; DNA replication; Mismatch repair; Nucleotide                                                              |

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excision repair; Cell Cycle, Mitotic; DNA Repair; DNA Replication; Telomere Maintenance

**Function**

DNA binding; DNA polymerase processivity factor activity; MutLalpha complex binding; dinucleotide insertion or deletion binding; protein binding; purine-specific mismatch base pair DNA N-glycosylase activity

The assembled human DNA clamp, a trimer of the protein PCNA.

