



Catalog No. 70-133EX

Anti-CDC6 antibody, rabbit polyclonal, affinity-purified

Key words: CDC6, DNA replication, Regulation of DNA replication, Regulation of cycline-dependent kinase activity, Phosphorylation, Checkpoint, Cell cycle, Cell division. Mitosis, ATP binding, Nucleotide-triphosphatase activity, Chromatin binding

Function: CDC6 (Cell Division Control Protein 6 homolog) (human; 560 aa, 62.7 kDa) is involved in the initiation of DNA replication. Also participates in checkpoint controls that ensure DNA replication is completed before mitosis is initiated.

Subcellular location: The protein is nuclear in G1 and cytoplasmic in S-phase cells.

Applications:

1. Western blotting (1/1,000~3,000)
2. Immunoprecipitation (Assay dependent)
3. Immunofluorescence staining

Immunogen: Recombinant GST-human CDC6 (1-326 amino acids) expressed in E. coli and purified.

Purification: The antiserum was first adsorbed with GST conjugated agarose column and the antibody in the flow-through fraction was then purified with GST-hCDC6 conjugated agarose column.

Size: 100 ug

Storage: Sent at 4°C and upon arrival, spin-down and store at -20°C

Data base Link: [uniprot/Q99741](https://uniprot.org/Q99741) (CDC6_HUMAN)

References: This product has been described in Ref.1 and used in the following references.

1. Fujita M. et al. (1999) Cell cycle regulation of human CDC6 protein. Intracellular localization, interaction with the human mcm complex, and CDC2 kinase-mediated hyperphosphorylation. [J Biol Chem.](#) 274:25927-32. **WB, IP, IF, Free article**
2. Fujita M. et al. (2002) Nuclear organization of DNA replication initiation proteins in mammalian cells. [J Biol Chem.](#) 277:10354-61. **WB, IP, IF, Free article**
3. Tatsumi Y. et al. (2006) Deregulation of Cdt1 induces chromosomal damage without rereplication and leads to chromosomal instability. [J Cell Sci.](#) 119:3128-40. **WB, Free article**
4. Sugimoto N. et al. (2009) Redundant and differential regulation of multiple licensing factors ensures prevention of re-replication in normal human cells. [J Cell Sci.](#) 121:1184-91.

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5. Yoshida K. et al. (2010) CDC6 interaction with ATR regulates activation of a replication checkpoint in higher eukaryotic cells. [J Cell Sci.](#) 123:225-35. **WB, IP, Free article**

6. Sugimoto N. et al. (2011) Chromatin remodeler sucrose nonfermenting 2 homolog (SNF2H) is recruited onto DNA replication origins through interaction with Cdc10 protein-dependent transcript 1 (Cdt1) and promotes pre-replication complex formation. [J Biol Chem.](#) 286:39200-10. **WB, Free article**

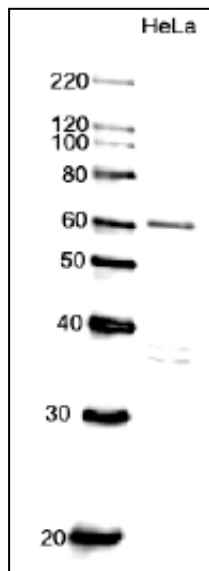


Fig.1 Identification of CDC6 protein in whole cell lysate of HeLa cells by western blotting using anti-CDC6 antibody.

Lane 1; Size marker proteins (kDa)

Lane 2; HeLa cell whole lysate (10 µg)

Anti-CDC6 antibody was used at 1/1,000 dilution.

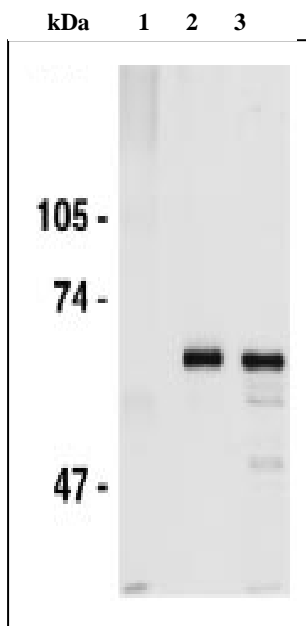


Fig 2. Immunoprecipitation of CDC6 protein from whole cell lysate of HeLa cells by using anti-CDC6 antibody.

CDC6 protein was precipitated from whole cell lysate of HeLa cells with anti-CDC6 antibody beads and probed with anti-CDC6 antibody by western blotting..

1; Control IP with non-immune IgG

2; Immunoprecipitates with anti-CDC6 antibody

3; Input (whole cell lysate)

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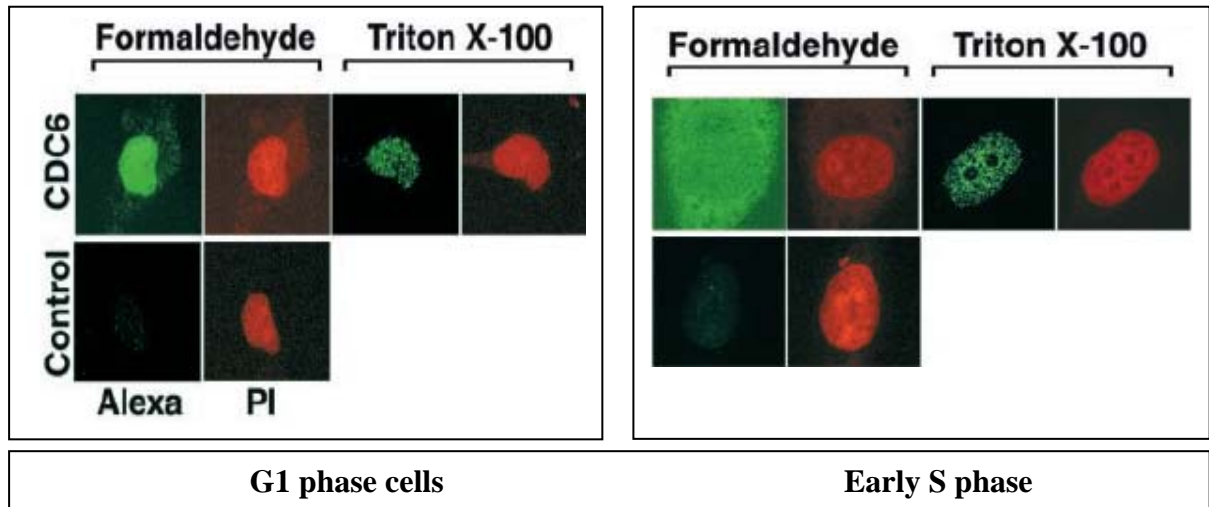
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Immunofluorescence staining of CDC6 protein in HeLa cells with anti-CDC6 antibody,

Confocal microscopic analyses of localization of CDC6 proteins in HeLa cells in G₁ or early S phase. Cells in mid to late G₁ phase or hydroxyurea-treated early S phase were fixed with formaldehyde directly or after extraction with Triton X-100 and then immunostained with anti-CDC6 or control non-immune antibody (Alexa:green). The samples were further treated with propidium iodide for DNA staining (PI; red).

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