

## Rabbit CDC2 Polyclonal Antibody | anti-CDC2 antibody

CDC2 Antibody

|                               |                       |                                        |                                                         |
|-------------------------------|-----------------------|----------------------------------------|---------------------------------------------------------|
| CATALOG #<br><b>AAA307999</b> | HOST<br><b>Rabbit</b> | REACTIVITY<br><b>Human, Mouse, Rat</b> | APPLICATIONS<br><b>Immunofluorescence, Western Blot</b> |
|-------------------------------|-----------------------|----------------------------------------|---------------------------------------------------------|

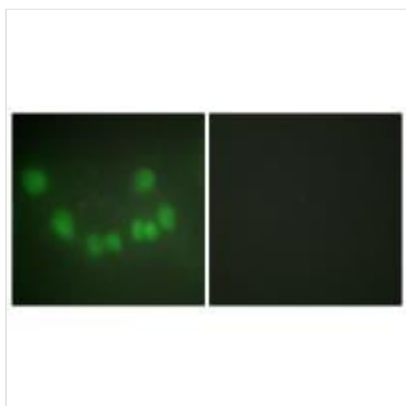
### PRODUCT SYNONYMS

CDC2; Polyclonal Antibody; CDC2 Antibody; CDC28; CDC2A; CDK1; Cell division control protein 2 homolog; Cyclin-dependent kinase 1; anti-CDC2 antibody

### PRODUCT SPECIFICATIONS

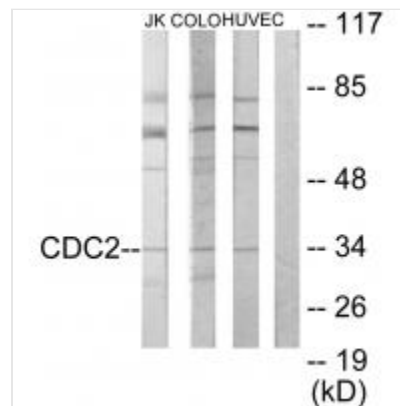
|                                                |                                                                                                                                                    |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                           | Rabbit                                                                                                                                             |
| Reactivity                                     | Human, Mouse, Rat                                                                                                                                  |
| Clonality                                      | Polyclonal                                                                                                                                         |
| Specificity                                    | The antibody detects endogenous levels of total CDC2 protein.                                                                                      |
| Purity/Purification                            | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.                              |
| Form/Format                                    | Rabbit IgG in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. |
| Concentration                                  | 1.0 mg/ml (varies by lot)                                                                                                                          |
| Sequence Length                                | 297                                                                                                                                                |
| Applicable Applications for anti-CDC2 antibody | IF (Immunofluorescence), WB (Western Blot)                                                                                                         |
| Immunogen Type                                 | Peptide                                                                                                                                            |
| Immunogen Description                          | Synthesized peptide derived from internal of human CDC2.                                                                                           |
| Target Name                                    | CDC2                                                                                                                                               |
| Preparation and Storage                        | Store at -20 degree C                                                                                                                              |

### IMAGES



**IF (Immunofluorescence)**

Immunofluorescence analysis of HUVEC cells, using CDC2 antibody.



**WB (Western Blot)**

Western blot analysis of extracts from Jurkat cells, COLO205 cells and HUVEC, using CDC2 antibody.

ADDITIONAL INFORMATION

|                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| Related Product Information for anti-CDC2 antibody | <p>Plays a key role in the control of the eukaryotic cell cycle by modulating the centrosome cycle as well as mitotic onset; promotes G2-M transition, and regulates G1 progress and G1-S transition via association with multiple interphase cyclins. Required in higher cells for entry into S-phase and mitosis. Phosphorylates PARVA/actopaxin, APC, AMPH, APC, BARD1, Bcl-xL/BCL2L1, BRCA2, CALD1, CASP8, CDC7, CDC20, CDC25A, CDC25C, CC2D1A, CSNK2 proteins/CKII, FZR1/CDH1, CDK7, CEBPB, CHAMP1, DMD/dystrophin, EEF1 proteins/EF-1, EZH2, KIF11/EG5, EGFR, FANCG, FOS, GFAP, GOLGA2/GM130, GRASP1, UBE2A/hHR6A, HIST1H1 proteins/histone H1, HMGA1, HIVEP3/KRC, LMNA, LMNB, LMNC, LBR, LATS1, MAP1B, MAP4, MARCKS, MCM2, MCM4, MKLP1, MYB, NEFH, NFIC, NPC/nuclear pore complex, PITPNM1/NIR2, NPM1, NCL, NUCKS1, NPM1/numatrin, ORC1, PRKAR2A, EEF1E1/p18, EIF3F/p47, p53/TP53, NONO/p54NRB, PAPOLA, PLEC/plectin, RB1, UL40/R2, RAB4A, RAP1GAP, RCC1, RPS6KB1/S6K1, KHDRBS1/SAM68, ESPL1, SKI, BIRC5/survivin, STIP1, TEX14, beta-tubulins, MAPT/TAU, NEDD1, VIM/vimentin, TK1, FOXO1, RUNX1/AML1 and RUNX2. CDK1/CDC2-cyclin-B controls pronuclear union in interphase fertilized eggs. Essential for early stages of embryonic development. During G2 and early mitosis, CDC25A/B/C-mediated dephosphorylation activates CDK1/cyclin complexes which phosphorylate several substrates that trigger at least centrosome separation, Golgi dynamics, nuclear envelope breakdown and chromosome condensation. Once chromosomes are condensed and aligned at the metaphase plate, CDK1 activity is switched off by WEE1- and PKMYT1-mediated phosphorylation to allow sister chromatid separation, chromosome decondensation, reformation of the nuclear envelope and cytokinesis. Inactivated by PKR/EIF2AK2- and WEE1-mediated phosphorylation upon DNA damage to stop cell cycle and genome replication at the G2 checkpoint thus facilitating DNA repair. Reactivated after successful DNA repair through WIP1-dependent signaling leading to CDC25A/B/C-mediated dephosphorylation and restoring cell cycle progression. In proliferating cells, CDK1-mediated FOXO1 phosphorylation at the G2-M phase represses FOXO1 interaction with 14-3-3 proteins and thereby promotes FOXO1 nuclear accumulation and transcription factor activity, leading to cell death of postmitotic neurons. The phosphorylation of beta-tubulins regulates microtubule dynamics during mitosis. NEDD1 phosphorylation promotes PLK1-mediated NEDD1 phosphorylation and subsequent targeting of the gamma-tubulin ring complex (gTuRC) to the centrosome, an important step for spindle formation. In addition, CC2D1A phosphorylation regulates CC2D1A spindle pole localization and association with SCC1/RAD21 and centriole cohesion during mitosis. The phosphorylation of Bcl-xL/BCL2L1 after prolonged G2 arrest upon DNA damage triggers apoptosis. In contrast, CASP8 phosphorylation during mitosis prevents its activation by proteolysis and subsequent apoptosis. This phosphorylation occurs in cancer cell lines, as well as in primary breast tissues and lymphocytes. EZH2 phosphorylation promotes H3K27me3 maintenance and epigenetic gene silencing. CALD1 phosphorylation promotes Schwann cell migration during peripheral nerve regeneration.Lee M.G., Nature 327:31-35(1987).Ohta T., Cancer Res. 58:1095-1098(1998).Draetta G., Cell 54:17-26(1988).</p> |
| Product Categories/Family for anti-CDC2 antibody   | Total protein Ab                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

NCBI AND UNIPROT INFORMATION

|                                  |                                     |
|----------------------------------|-------------------------------------|
| NCBI GI #                        | 4502709                             |
| NCBI GeneID                      | 983                                 |
| NCBI Accession #                 | NP_001777.1                         |
| NCBI GenBank Nucleotide #        | NM_001786.4                         |
| UniProt Accession #              | P06493; O60764; A8K7C4; C9J497      |
| Molecular Weight                 | 27,503 Da                           |
| NCBI Official Full Name          | cyclin-dependent kinase 1 isoform 1 |
| NCBI Official Synonym Full Names | cyclin-dependent kinase 1           |
| NCBI Official Symbol             | CDK1                                |
| NCBI Official Synonym Symbols    | CDC2; CDC28A; P34CDC2               |
| NCBI Protein Information         | cyclin-dependent kinase 1           |
| UniProt Protein Name             | Cyclin-dependent kinase 1           |
| UniProt Gene Name                | CDK1                                |

|                            |                                    |
|----------------------------|------------------------------------|
| UniProt Synonym Gene Names | CDC2; CDC28A; CDKN1; P34CDC2; CDK1 |
| UniProt Entry Name         | CDK1_HUMAN                         |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | [contact@aaabiotech.com](mailto:contact@aaabiotech.com)  
Online datasheet: <https://www.aaabiotech.com/polyclonal/cdc2-antibody-immunofluorescence-western-blot-elisa/307999>