



# Cdk1/Cdc2 Polyclonal Antibody

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>                  | YP-Ab-16696                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Isotype</b>                     | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Reactivity</b>                  | Human;Mouse;Rat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Applications</b>                | WB;IHC;IF;ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Gene Name</b>                   | CDK1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Immunogen</b>                   | The antiserum was produced against synthesized peptide derived from human CDC2. AA range:101-150                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Specificity</b>                 | Cdk1/Cdc2 Polyclonal Antibody detects endogenous levels of Cdk1/Cdc2 protein.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Formulation</b>                 | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Source</b>                      | Polyclonal, Rabbit,IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Purification</b>                | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Dilution</b>                    | Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/20000. Not yet tested in other applications.                                                                                                                                                                                                                                                                                                                                        |
| <b>Concentration</b>               | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Purity</b>                      | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Storage Stability</b>           | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>                    | Cdc 2;Cdc2;CDC28A;CDK 1;CDK1;CDK1_HUMAN;CDKN1;CELL CYCLE CONTROLLER CDC2;Cell division control protein 2;Cell division control protein 2 homolog;Cell division cycle 2 G1 to S and G2 to M;Cell division protein kinase 1;Cell Division Cycle 2 Protein;Cyclin Dependent Kinase 1;Cyclin-dependent kinase 1;DKFZp686L2222;MGC111195;p34 Cdk1;p34 protein kinase;P34CDC2;CDK1/CDC2                                                                                                                   |
| <b>Observed Band</b>               | 34kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Calculated Molecular Weight</b> | 34kD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Cell Pathway</b>                | Nucleus. Cytoplasm. Mitochondrion . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Cytoplasm, cytoskeleton, spindle. Cytoplasmic during the interphase. Colocalizes with SIRT2 on centrosome during prophase and on spindle fibers during metaphase of the mitotic cell cycle. Reversibly translocated from cytoplasm to nucleus when phosphorylated before G2-M transition when associated with cyclin-B1. Accumulates in mitochondria in G2-arrested cells upon DNA-damage. |
| <b>Tissue Specificity</b>          | Isoform 2 is found in breast cancer tissues.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |


**Function**

catalytic activity:ATP + [DNA-directed RNA polymerase] = ADP + [DNA-directed RNA polymerase] phosphate.,catalytic activity:ATP + a protein = ADP + a phosphoprotein.,enzyme regulation:Phosphorylation at Thr-14 or Tyr-15 inactivates the enzyme, while phosphorylation at Thr-161 activates it.,function:Plays a key role in the control of the eukaryotic cell cycle. It is required in higher cells for entry into S-phase and mitosis. p34 is a component of the kinase complex that phosphorylates the repetitive C-terminus of RNA polymerase II.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. CDC2/CDKX subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Forms a stable but non-covalent complex with a regulatory subunit and with a cyclin. Interacts with DLGAP5. Isoform 2 is unable to complex with c

**Background**

cyclin dependent kinase 1(CDK1) Homo sapiens The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein is a catalytic subunit of the highly conserved protein kinase complex known as M-phase promoting factor (MPF), which is essential for G1/S and G2/M phase transitions of eukaryotic cell cycle. Mitotic cyclins stably associate with this protein and function as regulatory subunits. The kinase activity of this protein is controlled by cyclin accumulation and destruction through the cell cycle. The phosphorylation and dephosphorylation of this protein also play important regulatory roles in cell cycle control. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009],

**matters needing attention**

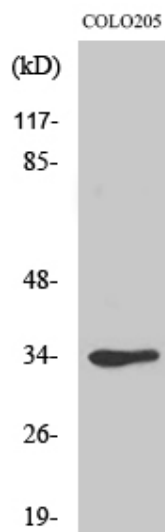
Avoid repeated freezing and thawing!

**Usage suggestions**

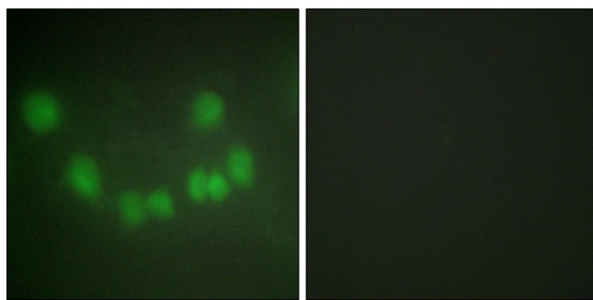
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



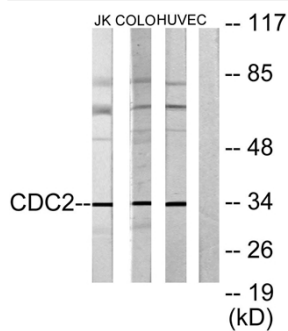
## Products Images



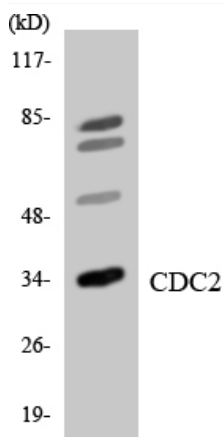
Western Blot analysis of various cells using Cdk1/Cdc2 Polyclonal Antibody diluted at 1:2000



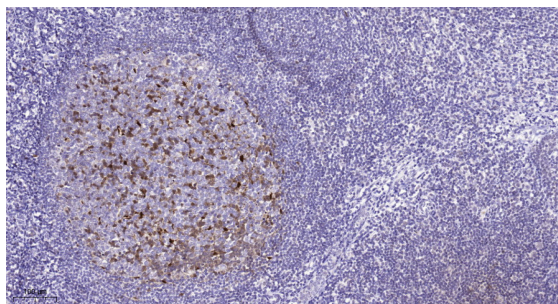
Immunofluorescence analysis of HUVEC cells, using CDC2 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from COLO205, HUVEC, and Jurkat cells, using CDC2 Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of the lysates from HeLa cells using CDC2 antibody.



Immunohistochemical analysis of paraffin-embedded human tonsil. 1, Tris-EDTA, pH 9.0 was used for antigen retrieval. 2 Antibody was diluted at 1:200 (4° overnight). 3, Secondary antibody was diluted at 1:200 (room temperature, 45 min).