



CDC2 Monoclonal Antibody

Catalog No	YP-Ab-16545
Isotype	IgG
Reactivity	Human
Applications	WB;IF;FCM;ELISA
Gene Name	CDK1
Immunogen	Purified recombinant fragment of CDC2 expressed in E. Coli.
Specificity	CDC2 Monoclonal Antibody detects endogenous levels of CDC2 protein.
Formulation	Ascitic fluid containing 0.03% sodium azide, 0.5% BSA, 50% glycerol.
Source	Monoclonal, Mouse
Purification	Affinity purification
Dilution	Western Blot: 1/500 - 1/2000. Immunofluorescence: 1/200 - 1/1000. Flow cytometry: 1/200 - 1/400. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	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
Observed Band	
Calculated Molecular Weight	
Cell Pathway	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.
Tissue Specificity	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

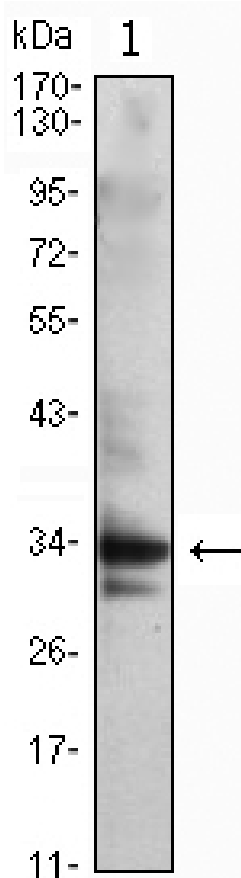
Avoid repeated freezing and thawing!

Usage suggestions

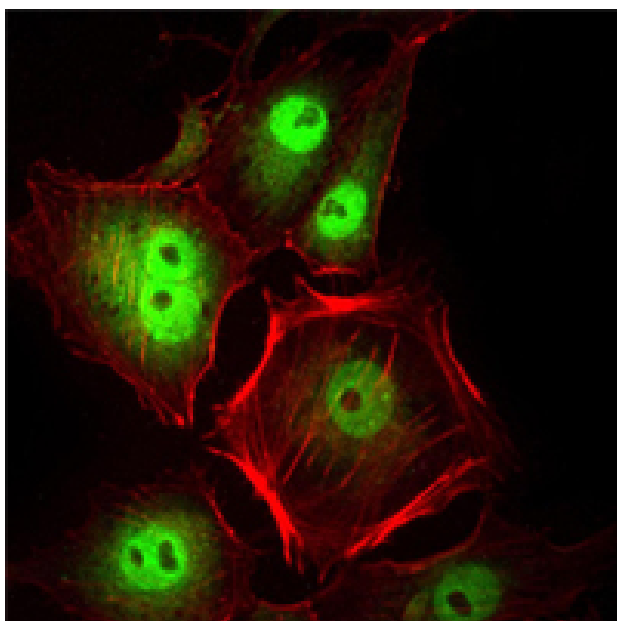
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



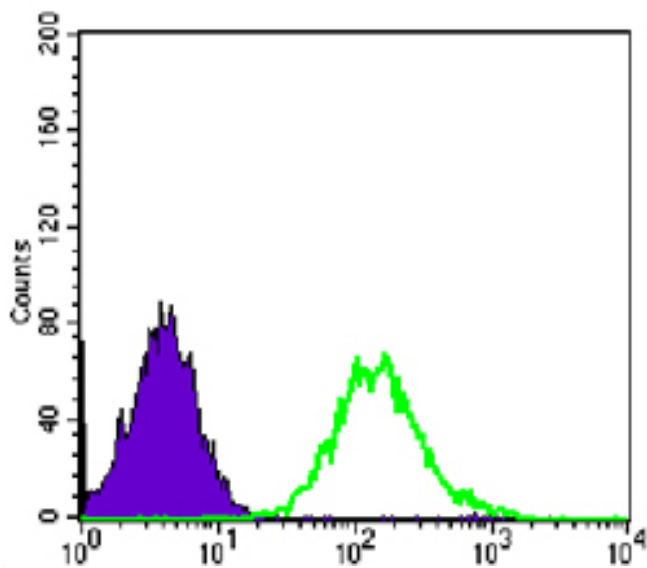
Products Images



Western Blot analysis using CDC2 Monoclonal Antibody against Jurkat (1) cell lysate.



Immunofluorescence analysis of HeLa cells using CDC2 Monoclonal Antibody (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow cytometric analysis of PC-2 cells using CDC2 Monoclonal Antibody (green) and negative control (purple).