CDC2 Monoclonal Antibody

Catalog No :	YM0141
Reactivity :	Human
Applications :	WB;IF;FCM;ELISA
Target :	CDK1/CDC2
Fields :	>>Cell cycle;>>Oocyte meiosis;>>p53 signaling pathway;>>Cellular senescence;>>Gap junction;>>Progesterone-mediated oocyte maturation;>>Human immunodeficiency virus 1 infection;>>Viral carcinogenesis
Gene Name :	CDK1
Protein Name :	Cell division protein kinase 1
Human Gene Id :	983
Human Swiss Prot No :	P06493
Mouse Swiss Prot No :	P11440
Immunogen :	Purified recombinant fragment of CDC2 expressed in E. Coli.
Specificity :	CDC2 Monoclonal Antibody detects endogenous levels of CDC2 protein.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Monoclonal, Mouse
Dilution :	WB 1:500 - 1:2000. IF 1:200 - 1:1000. Flow cytometry: 1:200 - 1:400. ELISA: 1:10000. Not yet tested in other applications.
Purification :	Affinity purification
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Molecularweight :	34kD

Cell Pathway : Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;Oocyte meiosis;p53;Gap junction;Progesterone-mediated oocyte maturation;

P References :

1. Mol Biol Cell. 2008 Aug;19(8):3536-43.
2. Eur J Cancer. 2009 May;45(8):1466-73.

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],

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

Subcellular Location : 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 splindle 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.

Expression : Isoform 2 is found in breast cancer tissues.

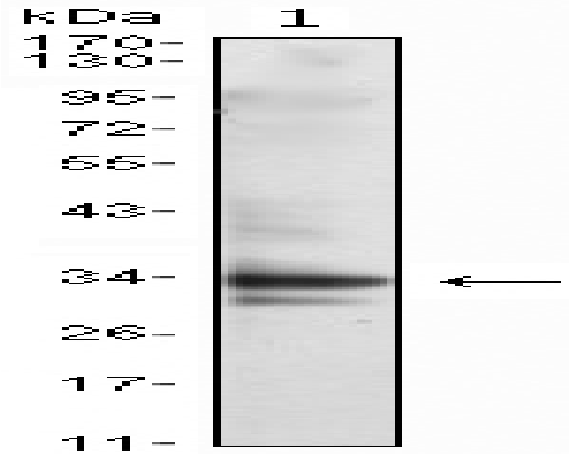
Sort : 3716

No4 : 1

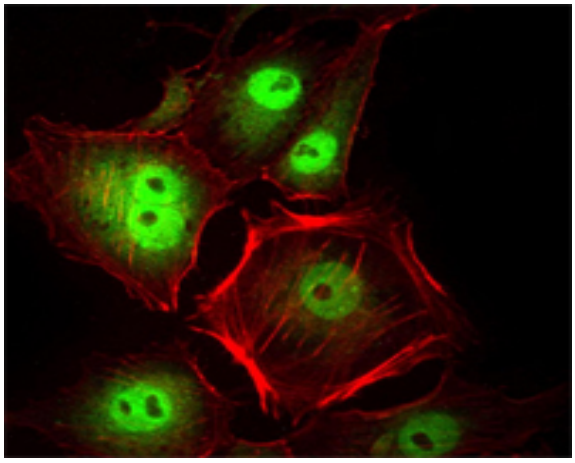
Host : Mouse

Modifications : Unmodified

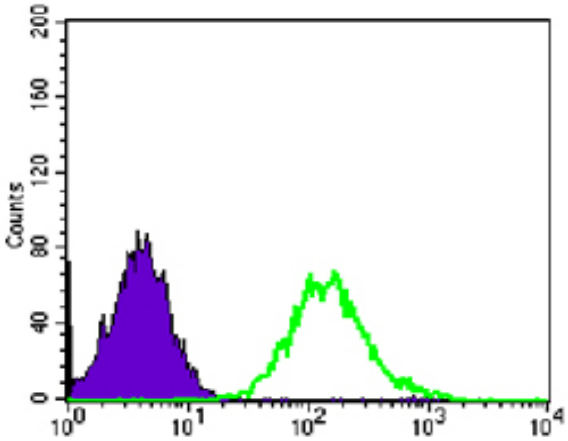
Products Images



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).