



Cdk1/2/3 (phospho Thr14) Polyclonal Antibody

Catalog No	YP-Ab-16586
Isotype	IgG
Reactivity	Human;Mouse;Rat;Monkey
Applications	WB;IF;ELISA
Gene Name	CDK1/CDK2/CDK3
Immunogen	The antiserum was produced against synthesized peptide derived from human CDK1/CDC2 around the phosphorylation site of Thr14. AA range:1-50
Specificity	Phospho-Cdk1/2/3 (T14) Polyclonal Antibody detects endogenous levels of Cdk1/2/3 protein only when phosphorylated at T14.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	Western Blot: 1/500 - 1/2000. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	Cdc2 related protein kinase;cdc2-related protein kinase;CDC28;CDC2A;Cdk 2; CDK1;CDK2;CDK2_HUMAN;CDKN2;Cell division kinase 2;Cell division protein kinase 2;Cyclin dependent kinase 2;cyclin dependent kinase 2-alpha;Cyclin-dependent kinase 2;kinase Cdc2;MPF;p33 protein kinase;p33(CDK2);CDK1/ CDC2;CDK1/CDK2/CDK3;Cyclin-dependent kinase 1/2/3;CDC2;CDC28A; CDKN1;P34CDC2;Cyclin-dependent kinase 1;Cell division control protein 2 homolog;Cell division protein kinase 1;p34 protein kinase;p33 pr
Observed Band	34kD
Calculated Molecular Weight	34kD
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

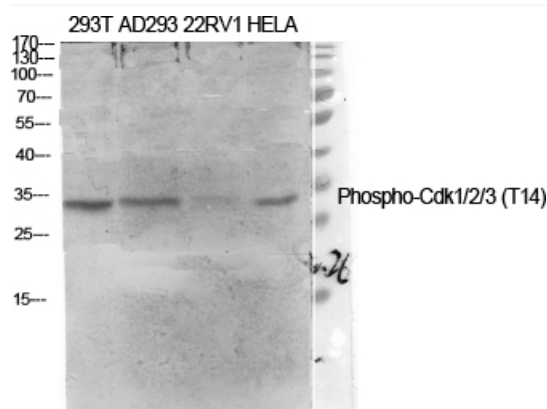
Avoid repeated freezing and thawing!

Usage suggestions

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



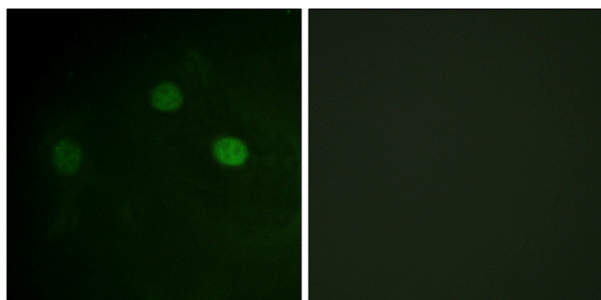
Products Images



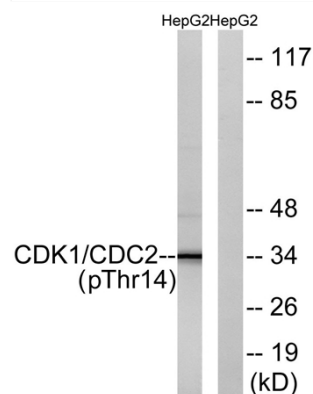
Western Blot analysis of various cells using Phospho-Cdk1/2/3 (T14) Polyclonal Antibody diluted at 1:2000



Western Blot analysis of COS7 cells using Phospho-Cdk1/2/3 (T14) Polyclonal Antibody diluted at 1:2000



Immunofluorescence analysis of COS7 cells, using CDK1/CDC2 (Phospho-Thr14) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from HepG2 cells treated with Forskolin 40nM 30', using CDK1/CDC2 (Phospho-Thr14) Antibody. The lane on the right is blocked with the phospho peptide.