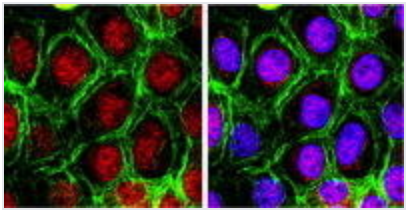
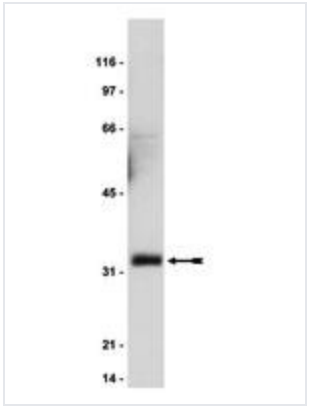
cdk1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	cdk1, Polyclonal Antibody
Full Product Name	cdk1, aa42-57 (cdc2, PSTAIR, Cyclin-dependent Kinase 1) (AP)
Product Gene Name	anti-cdk1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase.
Purity/Purification	Purified by antigen affinity chromatography.
Specificity	Recognizes human cdk1/cdc2 kinase (34kD). Species crossreactivity: mouse and rat. Species sequence homology: monkey, drosophilia, canine, sheep, chicken, frog and starfish. Wide species crossreactivity is expected.
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	34,095 Da
Chromosome Location	Chromosome: 10; NC_000010.10 (62538089..62554610). Location: 10q21.1
OMIM	116940
3D Structure	ModBase 3D Structure for P06493
Immunogen	Synthetic peptide corresponding to aa 42-57, EGVPSTAIREISLLKE-GGC, of human cdc2 kinase. The immunogen is identical in a wide range of species.
Conjugate	AP
Included Positive Antigen Control	MBS652617: Non-stimulated A431 lysate. Use 20ug per lane for minigels
Note	Preservative Free
Product Categories/Family for anti-cdk1 antibody	Antibodies; Protein Kinases
Applications Tested/Suitable for anti-cdk1 antibody	Immunoprecipitation (IP), Western Blot (WB), Immunocytochemistry (ICC)
Application Notes for anti-cdk1 antibody	IP: 4ug Immunoprecipitates cdc2 from 500ug of A431 RIPA lysates. WB: 0.5-2ug/ml detected cdc2 from human A431, mouse 3T3 and rat L6 RIPA cell lysates. Applications are based on unconjugated antibody.
Related Product Information for anti-cdk1 antibody	MBS6468467 is an antibody targeting cdk1. Also known as cdk1, aa42-57 (cdc2, PSTAIR, Cyclin-dependent Kinase 1) (AP). Reactive in Human, Mouse, Rat. Host: Rabbit.
Product References and Citations for anti-cdk1 antibody	1. Lee, M.G., et al., Nature 327: 31-35, 1987. 2. Samiei, M., et al., J Biol. Chem. 266: 14889--4892, 1991.
Other Notes	Small volumes of anti-cdk1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Immunofluorescence (IF) of anti-cdk1 antibody
Confocal Immunofluorescent microscopy of A431 cells. Cells were grown, washed, fixed with formaldahyde, and permeabilized with NP40. The cells were triple stained with with Anti-Cdk1/Cdc2 (Red, Cy3), Phalloidin (Actin, Green, AlexaFluor488), and DAPI (Blue, Nucleus). Staining shows positive nuclear staining.



Testing Data of anti-cdk1 antibody
A431 cell lysate probed with MBS620792 at ug/ml

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for cdk1. It may not necessarily be applicable to this product.

NCBI GI #	4502709
NCBI GeneID	983
NCBI Accession #	NP_001777.1
UniProt Primary Accession #	P06493
UniProt Secondary Accession #	O60764; A8K7C4; C9J497
UniProt Related Accession #	P06493
GenBank Nucleotide #	NM_001786.4
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
UniProt Protein Name	Cyclin-dependent kinase 1
UniProt Synonym Protein Names	Cell division control protein 2 homolog; Cell division protein kinase 1; p34 protein kinase
Protein Family	Cyclin-dependent kinase
UniProt Gene Name	CDK1
UniProt Synonym Gene Names	CDC2; CDC28A; CDKN1; P34CDC2; CDK1
UniProt Entry Name	CDK1_HUMAN
NCBI Protein Information	cyclin-dependent kinase 1; p34 protein kinase; cell cycle controller CDC2; cell division protein kinase 1; cell division control protein 2 homolog; cell division cycle 2, G1 to S and G2 to M
NCBI Summary for cdk1	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]

UniProt Comments for cdk1	CDK1: a protein kinase of the CDK family. Catalytic subunit of the conserved protein complex known as M-phase promoting factor (MPF), which is essential for G1/S and G2/M phase transitions. Mitotic cyclins stably associate with this protein and function as regulatory subunits. Its activity is controlled by cyclin availability and phosphorylation through the cell cycle. Activated in many cancers including colon, liver and breast. The T isoform, which lacks a regulatory region, is expressed in breast cancer. Inhibition in cancer cells may drive cells into apoptosis. May also drive cell migration. Inhibitors: BMS-265246, BMS-265246-01. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 2.7.11.22; Protein kinase, Ser/Thr (non-receptor); Kinase, protein; Motility/polarity/chemotaxis; Protein kinase, CMGC; EC 2.7.11.23; Cell cycle regulation; CMGC group; CDK family; CDK1 subfamily; CDK/CDK1 subfamily Chromosomal Location of Human Ortholog: 10q21.1 Cellular Component: nucleoplasm; centrosome; membrane; mitochondrion; spindle microtubule; cytoplasm; midbody; cytosol; nucleus Molecular Function: RNA polymerase subunit kinase activity; protein serine/threonine kinase activity; protein binding; cyclin binding; cyclin-dependent protein kinase activity; histone kinase activity; Hsp70 protein binding; ATP binding; protein kinase activity Biological Process: regulation of Schwann cell differentiation; activation of MAPKK activity; nerve growth factor receptor signaling pathway; activation of MAPK activity; response to toxin; histone phosphorylation; ventricular cardiac muscle cell development; regulation of embryonic development; stress-activated MAPK cascade; centrosome cycle; toll-like receptor 3 signaling pathway; response to organic cyclic substance; toll-like receptor 5 signaling pathway; small GTPase mediated signal transduction; protein complex assembly; G2/M transition of mitotic cell cycle; toll-like receptor 4 signaling pathway; positive regulation of cardiac muscle cell proliferation; response to drug; mitosis; organ regeneration; fibroblast growth factor receptor signaling pathway; positive regulation of protein import into nucleus, translocation; cell aging; pronuclear fusion; toll-like receptor 2 signaling pathway; chromosome condensation; response to ethanol; cell division; toll-like receptor 9 signaling pathway; response to activity; G1/S transition of mitotic cell cycle; response to amine stimulus; negative regulation of apoptosis; positive regulation of ubiquitin-protein ligase activity during mitotic cell cycle; axon guidance; apoptosis; mitotic nuclear envelope disassembly; positive regulation of mitotic cell cycle; toll-like receptor 10 signaling pathway; epithelial cell differentiation; anaphase-promoting complex-dependent proteasomal ubiquitin-dependent protein catabolic process; response to axon injury; DNA replication; epidermal growth factor receptor signaling pathway; cell migration; MyD88-independent toll-like receptor signaling pathway; organelle organization and biogenesis; MAPKKK cascade; peptidyl-threonine phosphorylation; microtubule cytoskeleton organization and biogenesis; DNA repair; MyD88-dependent toll-like receptor signaling pathway; G1/S-specific transcription in mitotic cell cycle; peptidyl-serine phosphorylation; response to cadmium ion; response to copper ion; regulation of ubiquitin-protein ligase activity during mitotic cell cycle; mitotic cell cycle G2/M transition DNA damage checkpoint; Ras protein signal transduction; insulin receptor signaling pathway; toll-like receptor signaling pathway; innate immune response; mitotic cell cycle; vascular endothelial growth factor receptor signaling pathway; positive regulation of DNA replication
Research Articles on cdk1	**1.** dual Rock and Cdk phosphorylation of Tppp1 inhibits its regulation of the cell cycle to increase cell proliferation
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