

**CDK1 (3B9) Mouse mAb (PBS Only)**

db6098-PBS

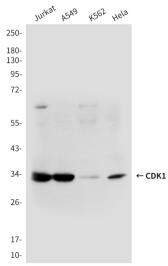
Package : 可询价

**Product Name :** CDK1 (3B9) Mouse mAb (PBS Only)**Cat.No.:** db6098-PBS**Synonyms :** CDK1; CDC2; CDC28A; CDKN1; P34CDC2; Cyclin-dependent kinase 1; CDK1; Cell division control protein 2 homolog; Cell division protein kinase 1; p34 protein kinase**Application :** WB, ICC/IF**Reactivity :** Human**Host species :** Mouse**Background**

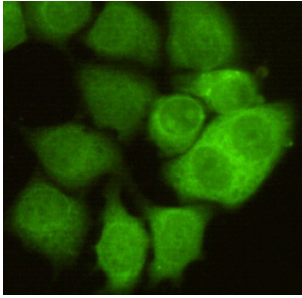
Plays a key role in the control of the eukaryotic cell cycle by modulating the centrosome cycle as well as mitotic onset; promotes G2-M transition, and regulates G1 progress and G1-S transition via association with multiple interphase cyclins. Required in higher cells for entry into S-phase and mitosis. Phosphorylates PARVA/actopaxin, APC, AMPH, APC, BARD1, Bcl-xL/BCL2L1, BRCA2, CALD1, CASP8, CDC7, CDC20, CDC25A, CDC25C, CC2D1A, CSNK2 proteins/CKII, FZR1/CDH1, CDK7, CEBPB, CHAMP1, DMD/dystrophin, EEF1 proteins/EF-1, EZH2, KIF11/EG5, EGFR, FANCG, FOS, GFAP, GOLGA2/GM130, GRASP1, UBE2A/hHR6A, HIST1H1 proteins/histone H1, HMGA1, HIVEP3/KRC, LMNA, LMNB, LMNC, LBR, LATS1, MAP1B, MAP4, MARCKS, MCM2, MCM4, MKLP1, MYB, NEFH, NFIC, NPC/nuclear pore complex, PITPNM1/NIR2, NPM1, NCL, NUCKS1, NPM1/numatrin, ORC1, PRKAR2A, EEF1E1/p18, EIF3F/p47, p53/TP53, NONO/p54NRB, PAPOLA, PLEC/plectin, RB1, UL40/R2, RAB4A, RAP1GAP, RCC1, RPS6KB1/S6K1, KHDRBS1/SAM68, ESPL1, SKI, BIRC5/survivin, STIP1, beta-tubulins, MAPT/TAU, NEDD1, VIM/vimentin, TK1, FOXO1, RUNX1/AML1 and RUNX2. CDK1/CDC2-cyclin-B controls pronuclear union in interphase fertilized eggs. Essential for early stages of embryonic development. During G2 and early mitosis, CDC25A/B/C-mediated dephosphorylation activates CDK1/cyclin complexes which phosphorylate several substrates that trigger at least centrosome separation, Golgi dynamics, nuclear envelope breakdown and chromosome condensation. Once chromosomes are condensed and aligned at the metaphase plate, CDK1 activity is switched off by WEE1- and PKMYT1-mediated phosphorylation to allow sister chromatid separation, chromosome decondensation, reformation of the nuclear envelope and cytokinesis. Inactivated by PKR/EIF2AK2- and WEE1-mediated phosphorylation upon DNA damage to stop cell cycle and genome replication at the G2 checkpoint thus facilitating DNA repair. Reactivated after successful DNA repair through WIP1-dependent signaling leading to CDC25A/B/C-mediated dephosphorylation and restoring cell cycle progression. In proliferating cells, CDK1-mediated FOXO1 phosphorylation at the G2-M phase represses FOXO1 interaction with 14-3-3 proteins and thereby promotes FOXO1 nuclear accumulation and transcription factor activity, leading to cell death of postmitotic neurons. The phosphorylation of beta-tubulins regulates microtubule dynamics during mitosis. NEDD1 phosphorylation promotes PLK1-mediated NEDD1

phosphorylation and subsequent targeting of the gamma-tubulin ring complex (γTuRC) to the centrosome, an important step for spindle formation. In addition, CC2D1A phosphorylation regulates CC2D1A spindle pole localization and association with SCC1/RAD21 and centriole cohesion during mitosis. The phosphorylation of Bcl-xL/BCL2L1 after prolonged G2 arrest upon DNA damage triggers apoptosis. In contrast, CASP8 phosphorylation during mitosis prevents its activation by proteolysis and subsequent apoptosis. This phosphorylation occurs in cancer cell lines, as well as in primary breast tissues and lymphocytes. EZH2 phosphorylation promotes H3K27me3 maintenance and epigenetic gene silencing. CALD1 phosphorylation promotes Schwann cell migration during peripheral nerve regeneration.

<b>Immunogen</b>	Purified recombinant human CDC2/CDK1 protein fragments expressed in E.coli
<b>Gene ID</b>	983
<b>Swiss Prot</b>	P06493
<b>Synonyms</b>	CDK1; CDC2; CDC28A; CDKN1; P34CDC2; Cyclin-dependent kinase 1; CDK1; Cell division control protein 2 homolog; Cell division protein kinase 1; p34 protein kinase
<b>Reactivity</b>	Human
<b>Application</b>	WB, ICC/IF
<b>Calculated MW</b>	34 kDa
<b>Observed MW</b>	34 kDa
<b>Host species</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clonality No.</b>	3B9-F8-B12
<b>Isotype</b>	IgG2b
<b>Purity</b>	Affinity Purification
<b>Conjugation</b>	Un-conjugated
<b>Concentration</b>	1 mg/mL
<b>Formulation</b>	PBS Only
<b>Storage Stability</b>	Store at -20°C. Recommended to aliquot into single-use vials. Supplied in 1X PBS (pH 7.4). BSA and Azide Free. Stable for 12 months from date of receipt.



Western blot analysis of CDC2/CDK1 in K562, A549, Jurkat and HeLa lysates using CDC2/CDK1 antibody.



Immunocytochemistry analysis of CDK1 in HeLa cells using CDK1 antibody.