Anti-CDK2 Mouse mAb

Purified Recombinant Mouse Monoclonal Antibody

Catalog # M014706

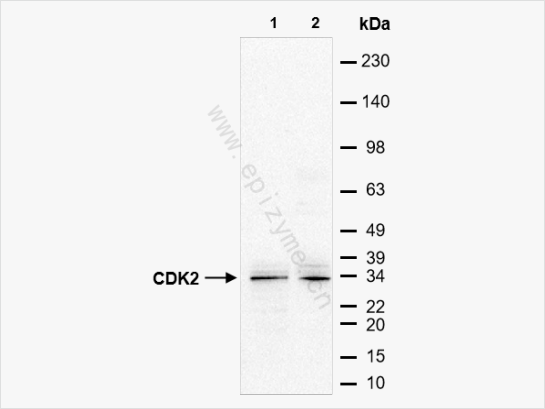
Product Information

Application	WB, ELISA
Reactivity	Human
Dilution	WB 1:1,000~1:2,000
Host	Mouse
Clonality	Monoclonal
Clone No.	90B23K63
Isotype	IgG
Label	Unconjugated
Immunogen	Recombinant protein of human Cytokeratin CDK2
Format	Affinity purified monoclonal antibody supplied in PBS with 0.01% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-CDK2 Mouse mAb [90B23K63] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Synonyms	Cdc2 related protein kinase, cdc2-related protein kinase, CDC28, CDC2A, Cdk 2, CDK1, CDK2, CDK2_HUMAN, CDKN2, Cell devision 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).
Calculated MW	Calculated MW: 34 kDa; Observed MW: 34 kDa
Uniprot ID	P24941
Gene ID	1017
Background	Serine/threonine-protein kinase involved in the control of the cell cycle; essential for meiosis, but dispensable for mitosis. Phosphorylates CTNNB1, USP37, p53/TP53, NPM1, CDK7, RB1, BRCA2, MYC, NPAT, EZH2. Triggers duplication of centrosomes and DNA. Acts at the G1-S transition to promote the E2F transcriptional program and the initiation of DNA synthesis, and modulates G2 progression; controls the timing of entry into mitosis/meiosis by controlling the subsequent activation of cyclin B/CDK1 by phosphorylation, and coordinates the activation of cyclin B/CDK1 at the centrosome and in the nucleus. Crucial role in orchestrating a fine balance between cellular proliferation, cell death, and DNA repair in human embryonic stem cells (hESCs). Activity of CDK2 is maximal during S phase and G2; activated by interaction with cyclin E during the early stages of DNA synthesis to permit G1-S transition, and subsequently activated by cyclin A2 (cyclin A1 in germ cells) during the late stages of DNA replication to drive the transition from S phase to mitosis, the G2 phase. EZH2 phosphorylation promotes H3K27me3 maintenance and epigenetic gene silencing. Phosphorylates CABLES1 (By similarity). Cyclin E/CDK2 prevents oxidative stress-mediated Ras-induced senescence by phosphorylating MYC. Involved in G1-S phase DNA damage checkpoint that prevents cells with damaged DNA from initiating mitosis; regulates homologous recombination-

Validation Images



Western Blot - Anti-CDK2 Mouse mAb [90B23K63]
All lanes: M014706 at 1:2,000 dilution
Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysates
Lane 2: U2OS (Human osteosarcoma epithelial cell) whole cell lysates
Lysates/proteins at 10 µg per lane.
Secondary antibody: Goat Anti-Mouse IgG (H+L), HRP Conjugated (Cat. No. LF101) at 1:5,000 dilution
Predicted band size: 34 kDa
Observed band size: 34 kDa
Developed using the ECL technique (Cat. No. SQ201).