Rabbit CDK2 Monoclonal Antibody | anti-CDK2 antibody

Anti-CDK2 Rabbit Monoclonal Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA46890	**Rabbit**	**Human, Mouse, Rat**	**Western Blot, Immunocytochemistry, Immunohistochemistry, Immunofluorescence, Immunoprecipitation**

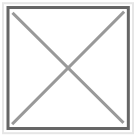
PRODUCT SYNONYMS

CDK2; Monoclonal Antibody; Anti-CDK2 Rabbit Monoclonal Antibody; Cyclin-dependent kinase 2; 2.7.11.22; Cell division protein kinase 2; p33 protein kinase; CDKN2; anti-CDK2 antibody

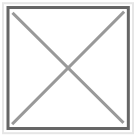
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Purity/Purification	Affinity-chromatography
Form/Format	Liquid
Sequence Length	264
Applicable Applications for anti-CDK2 antibody	WB (Western Blot), ICC (Immunocytochemistry), IHC (Immunohistochemistry), IF (Immunofluorescence), IP (Immunoprecipitation)
Immunogen	A synthesized peptide derived from human Cdk2
Subcellular Localization	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Nucleus, Cajal body. Cytoplasm. Endosome. Localized at the centrosomes in late G2 phase after separation of the centrosomes but before the start of prophase. Nuclear-cytoplasmic trafficking is mediated during the inhibition by 1,25-(OH)(2)D(3).
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

IMAGES



WB (Western Blot)
Western blot analysis of Cdk2 expression in HeLa cell lysate (AAA46890).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CDK2 monoclonal antibody overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for CDK2



IHC (Immunohistochemistry)
Immunohistochemical analysis of paraffin-embedded human beast carcinoma, using CDK2 Antibody(AAA46890)CDK2 was detected in paraffin-embedded tissue section. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CDK2 Antibody (AAA46890)overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

ADDITIONAL INFORMATION

Related Product Information for anti-CDK2 antibody	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. Interacts with cyclins A, B1, B3, D, or E. 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 Recombinantion-dependent repair by phosphorylating BRCA2, this phosphorylation is low in S phase when Recombinantion is active, but increases as cells progress towards mitosis. In response to DNA damage, double-strand break repair by homologous Recombinantion a reduction of CDK2-mediated BRCA2 phosphorylation. Phosphorylation of RB1 disturbs its interaction with E2F1. NPM1 phosphorylation by cyclin E/CDK2 promotes its dissociates from unduplicated centrosomes, thus initiating centrosome duplication. Cyclin E/CDK2-mediated phosphorylation of NPAT at G1-S transition and until prophase stimulates the NPAT- mediated activation of histone gene transcription during S phase. Required for vitamin D-mediated growth inhibition by being itself inactivated. Involved in the nitric oxide- (NO) mediated signaling in a nitrosylation/activation-dependent manner. USP37 is activated by phosphorylation and thus triggers G1-S transition. CTNNB1 phosphorylation regulates insulin internalization. Phosphorylates FOXP3 and negatively regulates its transcriptional activity and protein stability (By similarity).
Product Categories/Family for anti-CDK2 antibody	Cell Biology; Cell Cycle; Kinases/Phosphatases; cdks; Epigenetics and Nuclear Signaling; Cancer

NCBI AND UNIPROT INFORMATION

NCBI GI #	589811557
NCBI GeneID	1017
NCBI Accession #	NP_001277159.1
NCBI GenBank Nucleotide #	NM_001290230.1
UniProt Accession #	P24941; O75100; A8K7C6
Molecular Weight	33930 MW
NCBI Official Full Name	cyclin-dependent kinase 2 isoform 3
NCBI Official Synonym Full Names	cyclin dependent kinase 2
NCBI Official Symbol	CDK2
NCBI Official Synonym Symbols	CDKN2; p33(CDK2)
NCBI Protein Information	cyclin-dependent kinase 2
UniProt Protein Name	Cyclin-dependent kinase 2
UniProt Gene Name	**CDK2**
UniProt Synonym Gene Names	CDKN2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: https://stage.aaabiotech.com/monoclonal/cdk2-antibody-western-blot-immunocytochemistry-immunohistochemistry-immunofluorescence-immunoprecipitation-elisa/46890