

Rabbit CDK2 Polyclonal Antibody | anti-CDK2 antibody

Anti-CDK2 Antibody, Rabbit Polyclonal

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA254350	Rabbit	Human Predicted to React with: Mouse, Rat (Species predicted to react based on 100% sequence homology)	Immunohistochemistry

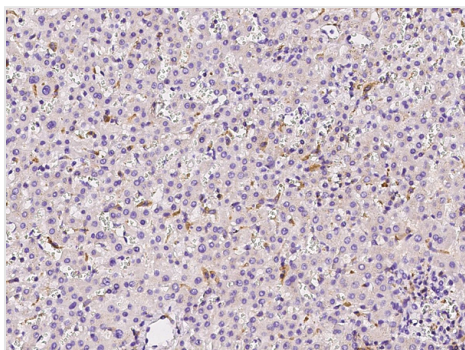
PRODUCT SYNONYMS

CDK2; Polyclonal Antibody; Anti-CDK2 Antibody; Rabbit Polyclonal; CDK2 Antibody; Rabbit PAb; Antigen Affinity Purified; cyclin-dependent kinase 2; Anti-CDKN2 Antibody; Anti-p33(CDK2) Antibody; anti-CDK2 antibody

PRODUCT SPECIFICATIONS

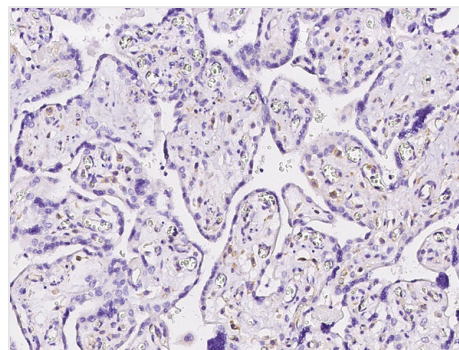
Host	Rabbit
Reactivity	Human Predicted to React with: Mouse, Rat (Species predicted to react based on 100% sequence homology)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Human CDK2
Purity/Purification	Protein A & Antigen Affinity
Form/Format	Liquid; 0.2um filtered solution in PBS
Applicable Applications for anti-CDK2 antibody	IHC (Immunohistochemistry)
Immunogen	A synthetic peptide corresponding to the C-terminus of the Human CDK2
Conjugation	Unconjugated
Preparation	Produced in rabbits immunized with a synthetic peptide corresponding to the C-terminus of the Human CDK2, and purified by antigen affinity chromatography.
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.

IMAGES



IHC (Immunohistochemistry)

Immunochemical staining of human CDK2 in human liver with rabbit polyclonal antibody (1:2000, formalin-fixed paraffin embedded sections).



IHC (Immunohistochemistry)

Immunochemical staining of human CDK2 in human placenta with rabbit polyclonal antibody (1:2000, formalin-fixed paraffin embedded sections).

ADDITIONAL INFORMATION

Related Product Information for anti-CDK2 antibody	CDK2 is a member of the Ser/Thr protein kinase family. This protein kinase is highly similar to the gene products of <i>S. cerevisiae</i> cdc28, and <i>S. pombe</i> cdc2. It is a catalytic subunit of the cyclin-dependent protein kinase complex, whose activity is restricted to the G1-S phase, and essential for cell cycle G1/S phase transition. Cdks (cyclin-dependent kinases) are heteromeric serine/threonine kinases that control progression through the cell cycle in concert with their regulatory subunits, the cyclins. Cdks are constitutively expressed and are regulated by several kinases and phosphatases, including Wee1, CDK-activating kinase and Cdc25 phosphatase. Although there are 12 different cdk genes, only 5 have been shown to directly drive the cell cycle (Cdk1, -2, -3, -4, and -6). Following extracellular mitogenic stimuli, cyclin D gene expression is upregulated. Cdk4 forms a complex with cyclin D and phosphorylates Rb protein, leading to liberation of the transcription factor E2F. E2F induces transcription of genes including cyclins A and E, DNA polymerase and thymidine kinase. Cdk4-cyclin E complexes form and initiate G1/S transition. Subsequently, Cdk1-cyclin B complexes form and induce G2/M phase transition. Cdk1-cyclin B activation induces the breakdown of the nuclear envelope and the initiation of mitosis. CDK2 associates with and regulated by the regulatory subunits of the complex including cyclin A or E, CDK inhibitor p21Cip1 (CDKN1A) and p27Kip1 (CDKN1B). Its activity is also regulated by its protein phosphorylation. CDK2 is involved in the control of the cell cycle. It also interacts with cyclins A, B1, B3, D, or E. Activity of CDK2 is maximal during S phase and G2.
Product Categories/Family for anti-CDK2 antibody	p53 Pathway
References	Bao ZQ, et al. (2011) Briefly bound to activate: transient binding of a second catalytic magnesium activates the structure and dynamics of CDK2 kinase for catalysis. <i>Structure</i> . 19(5):675-90. Neganova I, et al. (2011) An important role for CDK2 in G1 to S checkpoint activation and DNA damage response in human embryonic stem cells. <i>Stem Cells</i> . 29(4):651-9. Li J, et al. (2011) Phosphorylation of MCM3 protein by cyclin E/cyclin-dependent kinase 2 (Cdk2) regulates its function in cell cycle. <i>J Biol Chem</i> . 286(46):39776-85. Buis J, et al. (2012) Mre11 regulates CtIP-dependent double-strand break repair by interaction with CDK2. <i>Nat Struct Mol Biol</i> . 19(2):246-52.

NCBI AND UNIPROT INFORMATION

NCBI GI #	16936528
NCBI GeneID	1017
NCBI Accession #	NP_001789.2
NCBI GenBank Nucleotide #	NM_001798.3
UniProt Accession #	P24941 ; O75100 ; A8K7C6
Molecular Weight	33,930 Da
NCBI Official Full Name	cyclin-dependent kinase 2 isoform 1
NCBI Official Synonym Full Names	cyclin-dependent kinase 2
NCBI Official Symbol	CDK2
NCBI Official Synonym Symbols	p33(CDK2)
NCBI Protein Information	cyclin-dependent kinase 2; p33 protein kinase; cell division kinase 2; cdc2-related protein kinase; cell division protein kinase 2
UniProt Protein Name	Cyclin-dependent kinase 2
UniProt Gene Name	CDK2
UniProt Synonym Gene Names	CDKN2
UniProt Entry Name	CDK2_HUMAN

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.