

Datasheet for ABIN129504 **anti-CDK1 antibody**



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Overview

Quantity:	100 µg
Target:	CDK1
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Application:	Western Blotting (WB), ELISA, Immunoprecipitation (IP)

Product Details

Purpose:	Cdc2 p34 Antibody
Immunogen:	Immunogen: This protein A purified monoclonal antibody was produced by repeated immunizations with recombinant human p34 cdc2 fusion protein. Immunogen Type: Recombinant Protein
Clone:	POH-1
Isotype:	IgG2a kappa
Cross-Reactivity (Details):	This antibody is not cross reactive with other cyclin dependent kinases.
Characteristics:	Synonyms: mouse anti-Cdc2 antibody, mouse anti-p34 antibody, Cell Division Cycle 2 Protein antibody, Cyclin Dependent Kinase 1 antibody, p34 Cdk1 antibody, p34 protein kinase antibody, CDC28A, CDKN1, P34CDC2
Purification:	This protein A purified mouse monoclonal antibody reacts specifically with p34 cdc2 in human tissues and cell lines.
Sterility:	Sterile filtered

Target Details

Target:	CDK1
Alternative Name:	CDK1 (CDK1 Products)
Background:	<p>Background: p34 cdc2 is a serine-threonine protein kinase of 34,000 daltons that complexes with cyclin to form maturation promoting factor (MPF). The inactive form of the protein is phosphorylated at threonine (T) and tyrosine (Y) residues. In humans the phosphorylation appears to be performed by p60src. The active form of the protein is dephosphorylated and it functions by phosphorylating a number of proteins. The phosphorylation activity is coupled to the entry into the M-phase of the cell. p34 cdc2 protein must be associated with a normal cyclin protein for the M-phase to be completed normally. Association with deletion mutants of cyclin halts the M-phase before it is completed.</p>
Gene ID:	983
NCBI Accession:	NP_001307847
UniProt:	P06493
Pathways:	Cell Division Cycle , Fc-epsilon Receptor Signaling Pathway , Neurotrophin Signaling Pathway , Activation of Innate immune Response , Mitotic G1-G1/S Phases , DNA Replication , M Phase , Toll-Like Receptors Cascades , Synthesis of DNA

Application Details

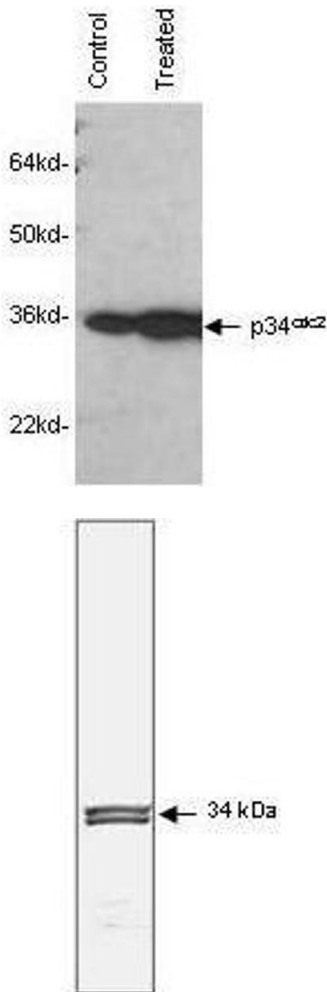
Application Notes:	<p>Application Note: Anti-p34 cdc2 has been tested by western blot and is suitable for immunohistochemistry, immunoprecipitation (as active kinase), and immunoblotting. The antibody detects the three bands within the 34kD region corresponding to the p34 protein and its cleavage products. HeLa cell lysate or human colon carcinoma is suggested as a positive control for immunoblotting. LEP fibroblast cell lysate is suggested as a negative control. Paraffin embedded tissue is reactive for immunohistochemistry using high temperature release and 0.1 % saponin treatment or other permeabilization method.</p> <p>Western Blot Dilution: 1:500 - 1:1,000</p> <p>Immunoprecipitation Dilution: 1:100</p> <p>ELISA Dilution: 1:5,000 - 1:20,000</p> <p>Other: User Optimized</p>
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

Publications

Product cited in:	<p>Ye, Fincher, Tang, McNeal, Gyax, Wexler, Ryan, James, Osmani: "Proteolysis and tyrosine phosphorylation of p34cdc2/cyclin B. The role of MCM2 and initiation of DNA replication to allow tyrosine phosphorylation of p34cdc2." in: The Journal of biological chemistry, Vol. 272, Issue 52, pp. 33384-93, (1998) (PubMed).</p> <p>Palmer, Gavin, Nebreda: "A link between MAP kinase and p34(cdc2)/cyclin B during oocyte maturation: p90(rsk) phosphorylates and inactivates the p34(cdc2) inhibitory kinase Myt1." in: The EMBO journal, Vol. 17, Issue 17, pp. 5037-47, (1998) (PubMed).</p>
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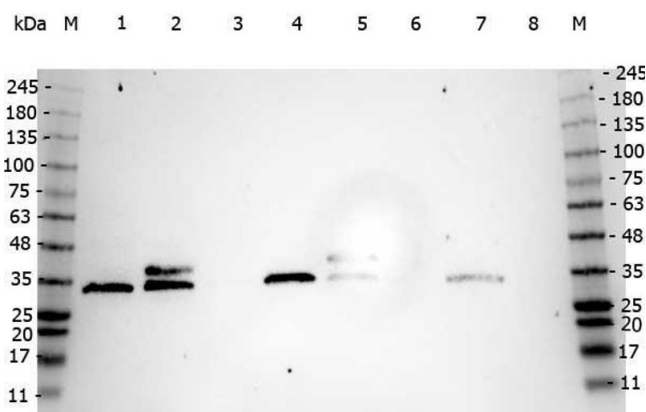


Western Blotting

Image 1. Mab anti-Human p34cdc2 antibody was used to detect human p34cdc2 by western blot in untreated (control) and drug treated (10 μ M genistein) lysates of MCF-7 cells. Very strong detection occurs using a 1:1,000 dilution. Personnel Communication, Xiao He Yang, University of Oklahoma Health Sciences Center.

Western Blotting

Image 2. Mab anti-Human p34cdc2 antibody (clone POH-1) is shown to detect human p34cdc2 by western blot. Detection occurs after 10 μ g of a HeLa whole cell lysate is loaded per lane. The blot was incubated with a 1:1,000 dilution of Mab anti-Human p34cdc2 at room temperature for 30 min followed by detection using 800 labeled Goat-a-Mouse IgG [H&L] diluted 1:5,000. A doublet band corresponding to human p34cdc2 is detected at \sim 34 kDa when compared with known molecular weight standards (not shown). The antibody may be used to detect endogenous human p34cdc2. 800 fluorescence image was captured using the Infrared Imaging System developed by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.



Western Blotting

Image 3. Western Blot of Mouse anti-CDC2 (p34) antibody. Marker: Opal Pre-stained ladder. Lane 1: HEK293 lysate. Lane 2: HeLa Lysate. Lane 3: MCF-7 Lysate. Lane 4: Jurkat Lysate. Lane 5: A549 Lysate. Lane 6: HL-60 Lysate. Lane 7: Raji Lysate. Lane 8: NIH/3T3 Lysate. Load: 35 μ g per lane. Primary antibody: CDC2 (p34) antibody at 1:5,000 for overnight at 4°C. Secondary antibody: Peroxidase mouse secondary antibody at 1:30,000 for 60 min at RT. Blocking

Buffer: 1% Casein-TTBS for 30 min at RT.
Predicted/Observed size: 34 kDa for CDC2 (p34).