

## Anti-cdc2 (p34) (MOUSE) Monoclonal Antibody - 200-301-160

**Code:** 200-301-160

**Size:** 100 µg

**Product Description:** Anti-cdc2 (p34) (MOUSE) Monoclonal Antibody - 200-301-160

**Concentration:** 1.0 mg/mL by UV absorbance at 280 nm

**PhysicalState:** Liquid (sterile filtered)

<b>Label</b>	Unconjugated
<b>Host</b>	Mouse
<b>Gene Name</b>	CDC2
<b>Species Reactivity</b>	human, mouse, rat
<b>Buffer</b>	0.02 M Potassium Phosphate, 0.5 M Sodium Chloride, pH 7.2
<b>Stabilizer</b>	None
<b>Preservative</b>	0.01% (w/v) Sodium Azide
<b>Storage Condition</b>	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.
<b>Synonyms</b>	mouse anti-cdc2 p34 antibody, mouse anti-cdc2 antibody, mouse anti-p34 antibody, Cell Division Cycle 2 Protein antibody, Cyclin Dependent Kinase 1 antibody, DKFZp686L20222 antibody, MGC111195 antibody, p34 Cdk1 antibody, p34 protein kinase antibody
<b>Application Note</b>	This antibody 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.
<b>Background</b>	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.
<b>Purity And Specificity</b>	This protein A purified mouse monoclonal antibody reacts specifically with p34 cdc2 in human tissues and cell lines. This antibody is not cross reactive with other cyclin dependent kinases. Cross reactivity with p34 cdc2 from other sources, especially mouse and rat will occur. This reagent has broad interspecies reactivity.
<b>Assay Dilutions</b>	User Optimized
<b>ELISA</b>	1:5,000 - 1:20,000
<b>Western Blot</b>	1:500 - 1:1,000
<b>Other Assays</b>	User Optimized
<b>Expiration</b>	Expiration date is one (1) year from date of opening.
<b>Immunogen</b>	This protein A purified monoclonal antibody was produced by repeated immunizations with recombinant human p34 cdc2 fusion protein.
<b>Specific Reference</b>	Lukas, J. et al. (1992) Distinct forms of human CDC2 identified by novel monoclonal antibodies. Eur. J. Biochem., 207, 169-176.  Ye, X.S. et al. (1997) Proteolysis and tyrosine phosphorylation of p34cdc2/cyclin B. The role of MCM2 and initiation of DNA replication to allow tyrosine phosphorylation of p34cdc2. J. Biol Chem 272(52):33384-93.  Palmer, A. et al. (1998) A link between MAP kinase and p34cdc2/cyclin B during oocyte maturation: p90rsk phosphorylates the p34cdc2 inhibitory kinase Myt1. EMBO J. 17, 5037-5047.
<b>Related Products</b>	

100-401-152	Anti-Cyclin B1 (RABBIT) Antibody - 100-401-152
200-301-174	Anti-p53 (MOUSE) Monoclonal Antibody - 200-301-174
200-301-400	Anti-ATM Protein Kinase pS1981 (MOUSE) Monoclonal Antibody - 200-301-400
610-4302	Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302

## Related Links

NCBI - P06493.2

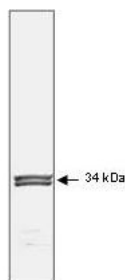
<http://www.ncbi.nlm.nih.gov/protein/P06493.2>

UniProtKB - P06493 <http://www.uniprot.org/uniprot/P06493>

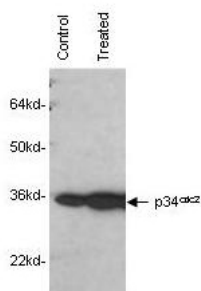
GeneID - 983

## Images

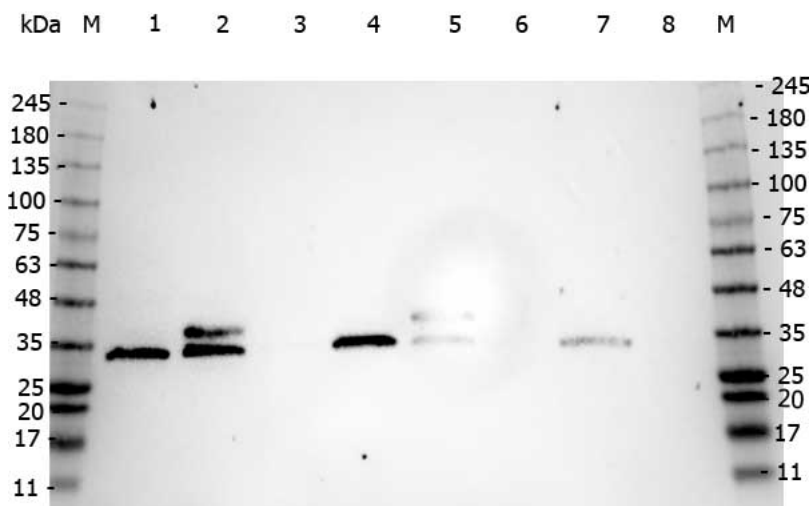
- 1 Mab anti-Human p34cdc2 antibody (clone POH-1) is shown to detect human p34cdc2 by western blot. Detection occurs after 10 µg of a HeLa whole cell lysate is loaded per lane. The blot was incubated with a 1:1,000 dilution of Mab anti-Human p34cdc2 at room temperature for 30 min followed by detection using IRDye™800 labeled Goat-a-Mouse IgG [H&L] (610-132-121) diluted 1:5,000. A doublet band corresponding to human p34cdc2 is detected at ~34 kDa when compared with known molecular weight standards (not shown). The antibody may be used to detect endogenous human p34cdc2. IRDye™800 fluorescence image was captured using the Odyssey® Infrared Imaging System developed by LI-COR, Inc. Other detection systems will yield similar results.



- 2 Mab anti-Human p34cdc2 antibody was used to detect human p34cdc2 by western blot in untreated (control) and drug treated (10 µM 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 Blot of Mouse anti-CDC2 (p34) antibody. Marker: Opal Pre-stained ladder (p/n MB-210-0500). Lane 1: HEK293 lysate (p/n W09-000-365). Lane 2: HeLa Lysate (p/n W09-000-363). Lane 3: MCF-7 Lysate (p/n W09-000-360). Lane 4: Jurkat Lysate (p/n W09-000-370). Lane 5: A549 Lysate (p/n W09-001-372). Lane 6: HL-60 Lysate (p/n W09-001-GL3). Lane 7: Raji Lysate (p/n W09-001-368). Lane 8: NIH/3T3 Lysate (p/n W10-000-358). Load: 35 µg 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).



#### Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.