Store at –20°C

#9112

cdc2 Antibody

☑ 100 µl
(10 Western mini-blots)

Cell Signaling TECHNOLOGY®

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

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Entrez-Gene ID # 983
Swiss-Prot Acc. # P06493

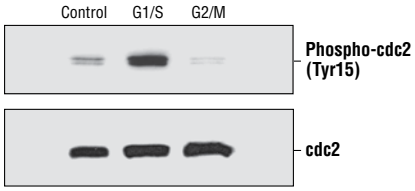
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R	34 kDa	Rabbit**

Background: Entry of all eukaryotic cells into mitosis is regulated by activation of cdc2 kinase. Activation of cdc2 is controlled at several steps including cyclin binding and phosphorylation of Thr161 (1–4). However, the critical regulatory step in activating cdc2 during progression into mitosis appears to be dephosphorylation of Tyr15 and Thr14 (3,5). Phosphorylation at Tyr15 and inhibition of cdc2 is carried out by Wee1 and Myt1 protein kinases, while Tyr15 dephosphorylation and activation of cdc2 is carried out by the cdc25 phosphatase (3,4,6).

Specificity/Sensitivity: cdc2 Antibody detects endogenous levels of total cdc2 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to residues surrounding Tyr15 of human cdc2. Antibodies are purified by protein A and peptide affinity chromatography.

Selected Application References:
Vincent, I. et al. (1997) Aberrant expression of mitotic cdc2/cyclin B1 kinase in degenerating neurons of Alzheimer's disease brain. *J. Neurosci.* 17 (10), 3588–3598. Applications: IHC-P (paraffin), Western Blotting.



Western blot analysis of extracts from Saos cells, untreated, hydroxyurea-treated (G1/S) or nocodazole-treated (G2/M), using Phospho-cdc2 (Tyr15) Antibody #9111 (upper) or cdc2 Antibody (lower).

Background References:
(1) Norbury, C. and Nurse, P. (1992) *Annu. Rev. Biochem.* 61, 441–470.
(2) Atherton-Fessler, S. et al. (1993) *Mol. Cell. Biol.* 13, 1675–1685.
(3) Watanabe, N. et al. (1995) *EMBO J.* 14, 1878–1891.
(4) Galaktionov, K. et al. (1995) *Genes Dev.* 9, 1046–1058.
(5) Hunter, T. (1995) *Cell* 80, 225–236.
(6) McGowan, C.H. and Russell, P. (1993) *EMBO J.* 12, 75–85.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by Western blot.**

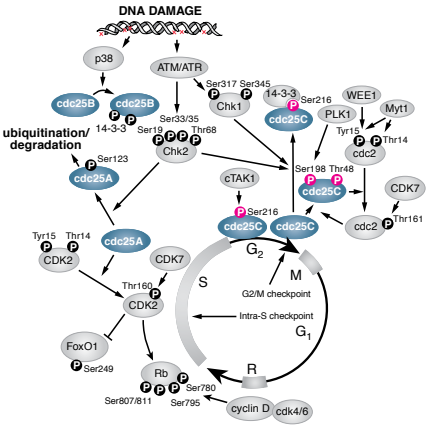
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Companion Products:
Phospho-Chk1 (Ser345) Antibody #2341
PhosphoPlus® cdc2 (Tyr15) Antibody Kit #9110
Phospho-cdc2 (Tyr15) Antibody #9111
cdc2 (Tyr15) Control Proteins #9113
Phospho-cdc2 (Thr161) Antibody #9114
cdc2 (POH1) Mouse mAb #9116
cdc25C Antibody #9522
Anti-rabbit IgG, HRP-linked Antibody #7074
Prestained Protein Marker, Broad Range (Premixed Format) #7720
Biotinylated Protein Ladder Detection Pack #7727
20X LumiGLO® Reagent and 20X Peroxide #7003

Please visit www.cellsignal.com for a complete listing of recommended companion products.



IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebra fish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.