#4539 Store at –20°C

Phospho-cdc2 (Tyr15) (10A11) Rabbit mAb

Cell Signaling TECHNOLOGY®

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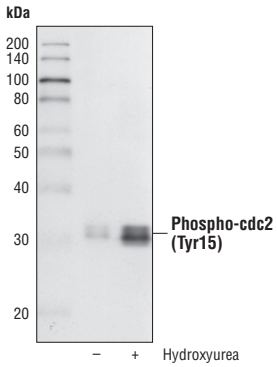
Entrez-Gene ID #983
UniProt ID #P06493

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC, F Endogenous	H, M, R, Mk	34 kDa	Rabbit IgG**

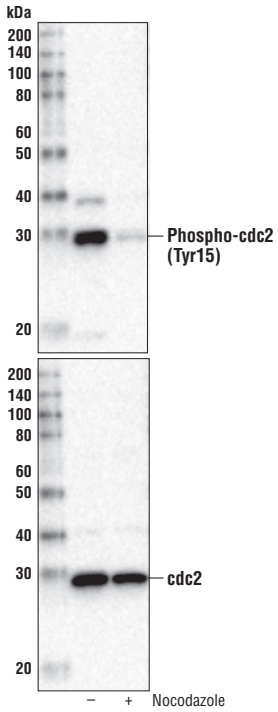
Background: The entry of eukaryotic cells into mitosis is regulated by cdc2 kinase activation, a process controlled at several steps including cyclin binding and phosphorylation of cdc2 at Thr161 (1). However, the critical regulatory step in activating cdc2 during progression into mitosis appears to be dephosphorylation of cdc2 at Tyr15 and Thr14 (2). Phosphorylation at Thr14 and Tyr15 resulting in inhibition of cdc2 can be carried out by Wee1 and Myt1 protein kinases (3,4). The cdc25 phosphatase may be responsible for removal of phosphates at Thr14 and Tyr15 and subsequent activation of cdc2 (1,5).

Specificity/Sensitivity: Phospho-cdc2 (Tyr15) (10A11) Rabbit mAb detects endogenous levels of cdc2 protein only when phosphorylated at tyrosine 15. Based on sequence similarity, the antibody may cross-react with CDK2 and CDK3.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr15 of human cdc2.



Western blot analysis of extracts from HeLa cells, untreated or hydroxyurea treated for 20 hours, using Phospho-cdc2 (Tyr15) (10A11) Rabbit mAb.



Western blot analysis of extracts from C6 cells, untreated (-) or treated with Nocodazole (0.1 µg/ml, 18 hr; +), using Phospho-cdc2 (Tyr15) (10A11) Rabbit mAb (upper) or cdc2 Antibody #77055 (lower).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. 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
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:50
Flow Cytometry	1:50

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

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

Background References:

(1) Atherton-Fessler, S. et al. (1994) *Mol. Biol. Cell.* 5, 989-1001.

(2) Norbury, C. et al. (1991) *EMBO. J.* 10, 3321-3329.

(3) McGowan, C.H. and Russell, P. (1993) *EMBO J.* 12, 75-85.

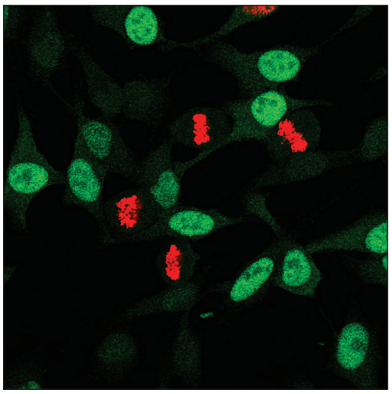
(4) Wells, N.J. et al. (1999) *J. Cell. Sci.* 112, 3361-3371.

(5) Hunter, T. (1995) *Cell* 80, 225-236.

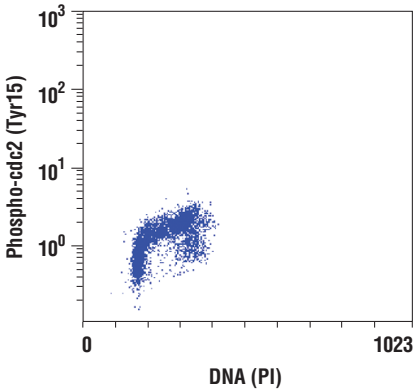
IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Confocal immunofluorescent analysis of asynchronous HeLa cells labeled with Phospho-cdc2 (Tyr15) (10A11) Rabbit mAb (green) and Phospho-Histone H3 (Ser10) (6G3) Mouse mAb #9706 (red).



Flow cytometric analysis of Jurkat cells, using Phospho-cdc2 (Tyr15) (10A11) Rabbit mAb versus propidium iodide (DNA content).