

Phospho-cdc2 (Tyr15) Antibody

- Small 100 µl (10 western blots)
- Large 300 µl (30 western blots)

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com

Support ■ 877-678-TECH (8324)
info@cellsignal.com

Web ■ www.cellsignal.com

rev. 05/10/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

| Applications | Species Cross-Reactivity* | Molecular Wt. | Source |
|---------------------|---------------------------|---------------|----------|
| W, IP Endogenous | H, M, R, Mk, X, Dm | 34 kDa | Rabbit** |

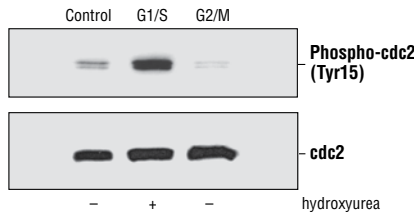
Background: The entry of eukaryotic cells into mitosis is regulated by cdc2 kinase activation, a process controlled at several steps including cyclin binding and phosphorylation of cdc2 at Thr161 (1). However, the critical regulatory step in activating cdc2 during progression into mitosis appears to 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) Antibody detects endogenous levels of cdc2, CDK2 and CDK5 only when phosphorylated at tyrosine 15. The antibody does not cross-react with CDK4, CDK6 or CDK7. It does detect the yeast orthologue of cdc2 (cdc28) when phosphorylated at tyrosine 19.

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

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.



Western blot analysis of extracts from Saos cells, either untreated or treated with hydroxyurea or nocodazole, using Phospho-cdc2 (Tyr15) Antibody #9111 (upper) or cdc2 Antibody #9112 (lower).

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

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.

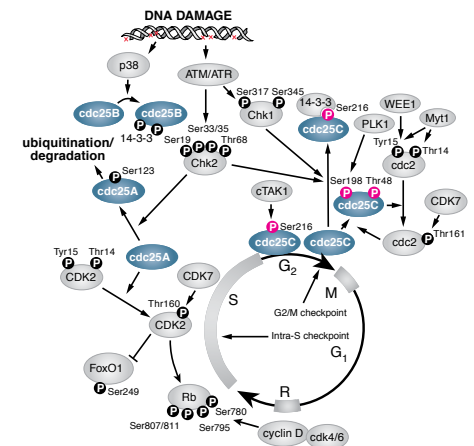
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

| | |
|---------------------|--------|
| Western blotting | 1:1000 |
| Immunoprecipitation | 1:100 |

For application 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.



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.