

cdc25B Antibody

✓ 100 µl
(10 western blots)

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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 Endogenous	H, M, R, Mk	62 kDa	Rabbit**

Background: cdc25 is a protein phosphatase responsible for dephosphorylating and activating cdc2, a crucial step in regulating the entry of all eukaryotic cells into mitosis (1). cdc25C is constitutively phosphorylated at Ser216 throughout interphase by c-TAK1, while phosphorylation at this site is DNA damage-dependent at the G2/M checkpoint (2). When phosphorylated at Ser216, cdc25C binds to members of the 14-3-3 family of proteins, sequestering cdc25C in the cytoplasm preventing premature mitosis (3). The checkpoint kinases Chk1 and Chk2 phosphorylate cdc25C at Ser216 in response to DNA damage (4,5).

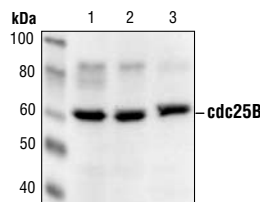
The major 14-3-3 binding sites of cdc25B are Ser309 and Ser361, both of which can be phosphorylated by p38 in response to ultraviolet radiation (6).

Specificity/Sensitivity: cdc25B Antibody recognizes endogenous levels of total cdc25B protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues at the carboxy terminus of human cdc25B. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- Jessus, C. and Ozon, R. (1995) *Prog. Cell Cycle Res.* 1, 215–228.
- Peng, C.Y. et al. (1997) *Science* 277, 1501–1505.
- Kumagai, A. and Dunphy, W.G. (1999) *Genes Dev.* 13, 1067–1072.
- Blasina, A. et al. (1999) *Curr. Biol.* 9, 1–10.
- Furnari, B. et al. (1999) *Mol. Biol. Cell* 10, 833–845.
- Bulavin, D.V. et al. (2001) Initiation of a G2/M checkpoint after ultraviolet radiation requires p38 kinase. *Nature* 411, 102–107.



Western blot analysis of extracts from HT29 cells, untreated (lane 1), hydroxyurea-treated (2 µM, G1/S, lane 2), and nocodazole-treated (50 ng/µl, M, lane 3), using cdc25B Antibody.

Entrez-Gene ID #994
Swiss-Prot Acc. #P30305

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.

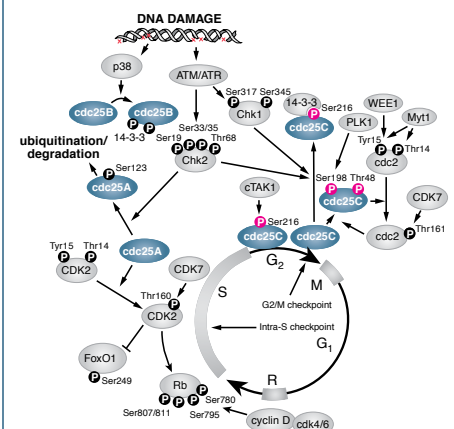
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000

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

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



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.