Store at –20°C

#9529

Phospho-cdc25C (Ser198) Antibody

☐ Small 100 µl
(10 Western mini-blots)

☐ Large 300 µl
(30 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

rev. 02/22/08

This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Entrez-Gene ID #995
Swiss-Prot Acc. #P30307

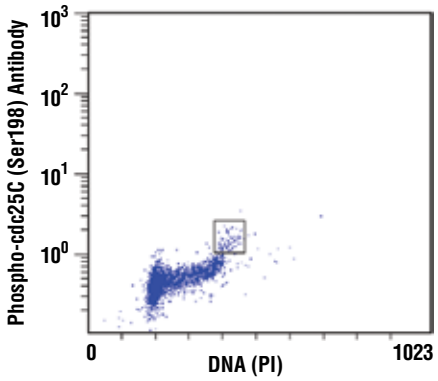
Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, F Transfected	H	60 to 80 kDa	Rabbit

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).

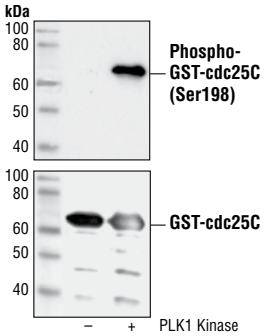
During prophase, polo-like kinase 1 (PLK1) phosphorylates cdc25C at Ser198, causing translocation from the cytoplasm to the nucleus, where cdc25C can interact with cdc2/cyclin B to allow for progression through the remaining stages of mitosis (6).

Specificity/Sensitivity: Phospho-cdc25C (Ser198) Antibody detects overexpressed levels of cdc25C only when phosphorylated at Ser198. This antibody does not cross-react with nonphosphorylated cdc25C.

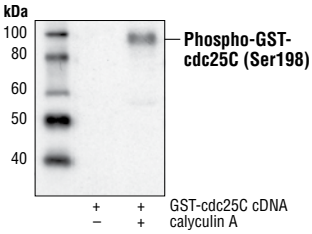
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding Ser198 of human cdc25C. Antibodies are purified by protein A and peptide affinity chromatography.



Flow cytometric analysis of untreated Jurkat cells, using Phospho-cdc25C (Ser198) Antibody versus propidium iodide (DNA content). The boxed population indicates phospho-cdc25C (Ser198)-positive cells.



Western blot analysis of GST-cdc25C, unphosphorylated or phosphorylated by HTScan® PLK1 Kinase #7611, using Phospho-cdc25C (Ser198) Antibody (upper) or GST (26H1) Mouse mAb #2624 (lower).



Western blot analysis of extracts from HeLa cells over-expressing full-length GST-cdc25C, untreated or treated with calyculin A #9902, using Phospho-cdc25C (Ser198) Antibody.

Background References:

(1) Jessus, C. and Ozon, R. (1995) *Prog. Cell Cycle Res.* 1, 215–228.

(2) Peng, C.Y. et al. (1997) *Science* 277, 1501–1505.

(3) Kumagai, A. and Dunphy, W.G. (1999) *Genes Dev.* 13, 1067–1072.

(4) Blasina, A. et al. (1999) *Curr. Biol.* 9, 1–10.

(5) Furnari, B. et al. (1999) *Mol. Biol. Cell* 10, 833–845.

(6) Toyoshima-Morimoto, F. et al. (2002) *EMBO Rep.* 3, 341–348.

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
Flow Cytometry	1:25

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

Companion Products:

Phospho-cdc25C (Thr48) Antibody #9527

Phospho-cdc25C (Ser216) Antibody #9528

Phospho-cdc25C (Ser216) (63F9) Rabbit mAb #4901

cdc25C (5H9) Rabbit mAb #4688

PLK1 Kinase #7611

Phototope®-HRP Western Blot Detection System, Anti-rabbit IgG, HRP-linked Antibody #7071

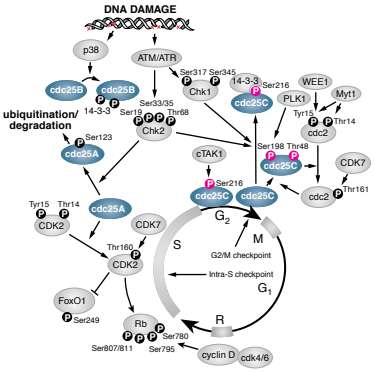
Anti-rabbit IgG, HRP-linked Antibody #7074

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

© 2008 Cell Signaling Technology, Inc.