Store at -20°C

Phospho-c-Abl (Tyr412) (247C7) Rabbit mAb

#2865

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rev. 12/31/15

Entrez-Gene ID #25
UniProt ID #P00519

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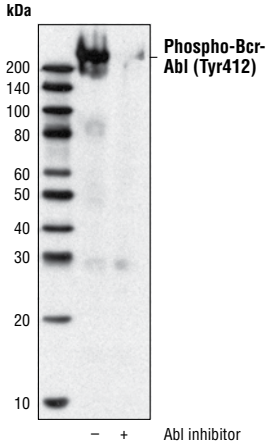
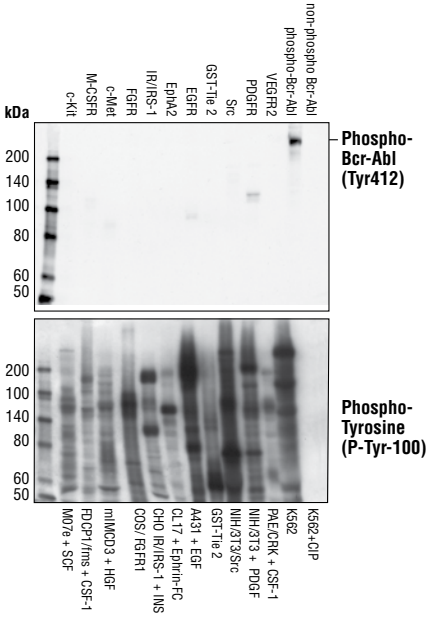
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Endogenous	H, (M)	135 kDa c-Abl. 210 kDa Bcr-Abl.	Rabbit IgG**

Background: The c-Abl proto-oncogene encodes a nonreceptor protein tyrosine kinase that is ubiquitously expressed and highly conserved in metazoan evolution. c-Abl protein is distributed in both the nucleus and the cytoplasm of cells. It is implicated in regulating cell proliferation, differentiation, apoptosis, cell adhesion, and stress responses (1-3). c-Abl kinase activity is increased *in vivo* by diverse physiological stimuli including integrin activation; PDGF stimulation; and binding to c-Jun, Nck, and RFX1 (2,4). The *in vivo* mechanism for regulation of c-Abl kinase activity is not completely understood. Tyr245 is located in the linker region between the SH2 and catalytic domains. This positioning is conserved among Abl family members. Phosphorylation at Tyr245 is involved in the activation of c-Abl kinase (5). In addition, phosphorylation at Tyr412, which is located in the kinase activation loop of c-Abl, is required for kinase activity (6).



Western blot analysis of extracts from K562 cells, untreated or treated with an Abl inhibitor, using Phospho-c-Abl (Tyr412) (247C7) Rabbit mAb.



Western blot analysis of extracts from cells expressing various activated tyrosine kinase proteins, using Phospho-c-Abl (Tyr412) (247C7) Rabbit mAb (upper) or Phospho-Tyrosine mAb (P-Tyr-100) #9411 (lower). Phospho-c-Abl (Tyr412) (247C7) Rabbit mAb specifically recognizes the activated Abl of Bcr-Abl fusion proteins, whose phosphorylation was abolished by calf intestinal phosphatase (CIP) treatment.

Specificity/Sensitivity: Phospho-c-Abl (Tyr412) (247C7) Rabbit mAb detects endogenous Abl proteins only when phosphorylated at tyrosine 412. The antibody does not cross-react with other phosphorylated tyrosine kinases.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr412 of human c-Abl.

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

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

Background References:

(1) Wang, J.Y. et al. (2000) *Oncogene* 19, 5643-5650.

(2) Van Etten, R.A. et al. (1999) *Trends Cell. Biol.* 9, 179-182.

(3) Danial, N.N. et al. (2000) *Oncogene* 19, 2523-2531.

(4) Shaul, Y. et al. (2000) *Cell Death Differ.* 7, 10-16.

(5) Brasher, B.B. et al. (2000) *J. Biol. Chem.* 275, 35631-35637.

(6) Pluk, H. et al. (2002) *Cell* 108, 247-259.

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.

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Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **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.