

Phospho-Chk2 (Thr68) (C13C1) Rabbit mAb (PE Conjugate)

✓ 100 µl
(50 tests)



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rev. 03/21/14

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez Gene ID #11200
UniProt ID #096017

Applications F Endogenous	Species Cross-Reactivity* H, (Mk)	Isotype Rabbit IgG
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Description: This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated Phospho-Chk2 (Thr68) (C13C1) Rabbit mAb #2197.

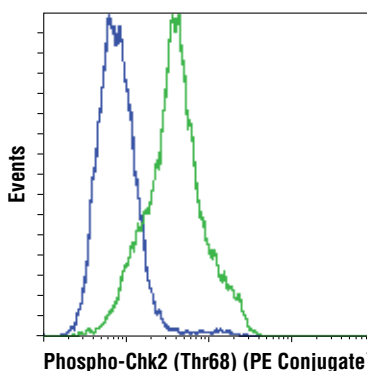
Background: Chk2 is the mammalian orthologue of the budding yeast Rad53 and fission yeast Cds1 checkpoint kinases (1-3). The amino-terminal domain of Chk2 contains a series of seven serine or threonine residues (Ser19, Thr26, Ser28, Ser33, Ser35, Ser50, and Thr68) each followed by glutamine (SQ or TQ motif). These are known to be preferred sites for phosphorylation by ATM/ATR kinases (4,5). After DNA damage by ionizing radiation (IR), UV irradiation, or hydroxyurea treatment, Thr68 and other sites in this region become phosphorylated by ATM/ATR (5-7). The SQ/TQ cluster domain, therefore, seems to have a regulatory function. Phosphorylation at Thr68 is a prerequisite for the subsequent activation step, which is attributable to auto-phosphorylation of Chk2 at residues Thr383 and Thr387 in the activation loop of the kinase domain (8).

Specificity/Sensitivity: Phospho-Chk2 (Thr68) (C13C1) Rabbit mAb (PE Conjugate) detects endogenous levels of Chk2 only when phosphorylated at Thr68.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr68 of human Chk2.

Background References:

- (1) Allen, J.B. et al. (1994) *Genes Dev.* 8, 2401-2415.
- (2) Weinert, T.A. et al. (1994) *Genes Dev.* 8, 652-665.
- (3) Murakami, H. and Okayama, H. (1995) *Nature* 374, 817-819.
- (4) Kastan, M.B. and Lim, D.S. (2000) *Nat. Rev. Mol. Cell Biol.* 1, 179-186.
- (5) Matsuoka, S. et al. (2000) *Proc. Natl. Acad. Sci. USA* 97, 10389-10394.
- (6) Melchionna, R. et al. (2000) *Nat. Cell Biol.* 2, 762-765.
- (7) Ahn, J.Y. et al. (2000) *Cancer Res.* 60, 5934-5936.
- (8) Lee, C.H. and Chung, J.H. (2001) *J. Biol. Chem.* 276, 30537-30541.



Flow cytometric analysis of HeLa cells, untreated (blue) or UV-treated (green), using Phospho-Chk2 (Thr68) (C13C1) Rabbit mAb (PE Conjugate).

Storage: Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.

***Species cross-reactivity is determined by western blot using the unconjugated antibody.**

Recommended Antibody Dilutions:

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.

U.S. Patent No. 5,675,063