

Store at
-20°C

PhosphoPlus® Chk2 (Thr68) Antibody Duet

#12298



Support: +1-978-867-2388 (U.S.)
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Entrez-Gene ID #11200
UniProt ID #O96017

New 07/18

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

Products Included	Product #	Quantity	Mol. Wt.	Isotype
P-Chk2 (T68) (C13C1) Rabbit mAb	2197	100 µl	62 kDa	Rabbit IgG
Chk2 (D9C6) XP® Rabbit mAb	6334	100 µl	62 kDa	Rabbit IgG

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions and additional application protocols.

Description: PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

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 autophosphorylation of Chk2 at residues Thr383 and Thr387 in the activation loop of the kinase domain (8).

Specificity/Sensitivity: Phospho-Chk2 (Thr68) (C13C1) Rabbit mAb detects endogenous levels of Chk2 only when phosphorylated at Thr68. Chk2 (D9C6) XP® Rabbit mAb recognizes endogenous levels of total Chk2 protein.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr68 of human Chk2 or with a recombinant protein specific to human Chk2 protein.

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.*

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.

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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.