Technical support: order@acebiolab.com
Phone: 886-3-2870051

Datasheet

Ver.1 Date : 20180222

Phospho-Chk1/2 Antibody Sampler Kit

Cat# AK0222

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

Chk1 kinase acts downstream of ATM/ATR kinase and plays an important role in DNA damage checkpoint control, embryonic development, and tumor suppression. Activation of Chk1 involves phosphorylation at Ser317 and Ser345 by ATM/ATR, followed by autophosphorylation of Ser296. Activation occurs in response to blocked DNA replication and certain forms of genotoxic stress. While phosphorylation at Ser345 serves to localize Chk1 to the nucleus following checkpoint activation, phosphorylation at Ser317 along with site-specific phosphorylation of PTEN allows for re-entry into the cell cycle following stalled DNA replication. Chk1 exerts its checkpoint mechanism on the cell cycle, in part, by regulating the cdc25 family of phosphatases. Chk1 phosphorylation of cdc25A targets it for proteolysis and inhibits its activity through 14-3-3 binding. Activated Chk1 can inactivate cdc25C via phosphorylation at Ser216, blocking the activation of cdc2 and transition into mitosis. Centrosomal Chk1 has been shown to phosphorylate cdc25B and inhibit its activation of CDK1-cyclin B1, thereby abrogating mitotic spindle formation and chromatin condensation. Furthermore, Chk1 plays a role in spindle checkpoint function through regulation of aurora B and BubR1. Research studies have implicated Chk1 as a drug target for cancer therapy as its inhibition leads to cell death in many cancer cell lines. Chk2 is the mammalian homologue of the budding yeast Rad53 and fission yeast Cds1 checkpoint kinases. The amino-terminal domain of Chk2 contains a series of seven serine or threonine residues (Ser19, Thr26, Ser28, Ser33, Ser35, Ser50 and Thr68) followed by glutamine (SQ or TQ motif). These are known to be preferred sites for phosphorylation by ATM/ATR kinases. Indeed, after DNA damage by ionizing radiation (IR), UV irradiation and DNA replication blocked by hydroxyurea, Thr68 and other sites in this region become phosphorylated by ATM/ATR. The SQ/TQ cluster domain, therefore, seems to have a regulatory function. Phosphorylation at Thr68 is a prereq

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340480	CHEK1 Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human	Rabbit
A340206	Phospho-CHEK1 (Ser280) Polyclonal Antibody	20µL	WB, ELISA	Human	Rabbit
A340207	Phospho-CHEK1 (Ser317) Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit

A340321	Phospho-CHEK1 (Ser301) Polyclonal Antibody	20μL	WB, IF, ELISA	Human, Mouse, Rat	Rabbit
A340481	CHEK2 Polyclonal Antibody	20μL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340208	Phospho-CHEK2 (Ser516) Polyclonal Antibody	20μL	WB, ELISA	Human, Monkey	Rabbit
A340208	Phospho-CHEK2 (Thr68) Polyclonal Antibody	20μL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340320	Phospho-CHEK2 (Thr383) Polyclonal Antibody	20μL	WB, IF, ELISA	Human, Mouse, Rat, Monkey	Rabbit
A340340	Phospho-CHEK2 (Thr387) Polyclonal Antibody	20μL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120μL	WB, ELISA	Rabbit	Goat

PRODUCT USE LIMITATION

These products are intended for research use only.