

CHK1 monoclonal antibody

Catalog: MB66713

Host: Mouse

Reactivity: Human, Mouse

BackGround:

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.

Product:

Mouse IgM. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 56 kDa

Swiss-Prot:

O14757

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/500 - 1/1000)

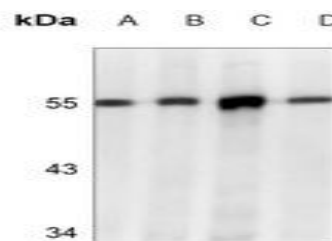
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of CHK1 protein.

DATA:



Western blot analysis of CHK1 expression in A431 (A), HeLa (B), Jurkat (C), K562 (D), MCF7 (E) whole cell lysates.

Note:

For research use only, not for use in diagnostic procedure.

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