Best Tools for immunology Research

Chk2 (Phospho Ser19) rabbit pAb

Catalog No :	YP1300
Reactivity :	Human;Rat;Mouse;
Applications :	WB
Target :	Chk2
Fields :	>>Cell cycle;>>p53 signaling pathway;>>Cellular senescence;>>Human T-cell leukemia virus 1 infection
Gene Name :	CHEK2 CDS1 CHK2 RAD53
Protein Name :	Chk2 (Ser19)
Human Gene Id :	11200
Human Swiss Prot No :	O96017
Mouse Gene Id :	50883
Mouse Swiss Prot No :	Q9Z265
Immunogen :	Synthesized phosho peptide around human Chk2 (Ser19)
Specificity :	This antibody detects endogenous levels of Human Chk2 (phospho-Ser19)
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:1000-2000
Purification :	The antibody was affinity-purified from rabbit serum by affinity-chromatography using specific immunogen.
Concentration :	1 mg/ml

Storage Stability : -15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band : 61kD

Cell Pathway : Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;p53;

Background : In response to DNA damage and replication blocks, cell cycle progression is halted through the control of critical cell cycle regulators. The protein encoded by this gene is a cell cycle checkpoint regulator and putative tumor suppressor. It contains a forkhead-associated protein interaction domain essential for activation in response to DNA damage and is rapidly phosphorylated in response to replication blocks and DNA damage. When activated, the encoded protein is known to inhibit CDC25C phosphatase, preventing entry into mitosis, and has been shown to stabilize the tumor suppressor protein p53, leading to cell cycle arrest in G1. In addition, this protein interacts with and phosphorylates BRCA1, allowing BRCA1 to restore survival after DNA damage. Mutations in this gene have been linked with Li-Fraumeni syndrome, a highly penetrant familial cancer phenotype usually associated with inherited mutati

Function : catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,disease:Defects in CHEK2 are associated with Li-Fraumeni syndrome 2 (LFS2) [MIM:609265]; a highly penetrant familial cancer phenotype usually associated with inherited mutations in p53/TP53.,disease:Defects in CHEK2 are found in some patients with osteosarcoma (OSRC) [MIM:259500].,disease:Defects in CHEK2 are found in some patients with prostate cancer (CaP) [MIM:176807].,enzyme regulation:Rapidly phosphorylated on Thr-68 by MLTK in response to DNA damage and to replication block. Kinase activity is also up-regulated by autophosphorylation.,function:Regulates cell cycle checkpoints and apoptosis in response to DNA damage, particularly to DNA double-strand breaks. Inhibits CDC25C phosphatase by phosphorylation on 'Ser-216', preventing the entry into mitosis. May also play a role in meiosis. Regulates the TP53

Subcellular Location : [Isoform 2]: Nucleus. Isoform 10 is present throughout the cell.; [Isoform 4]: Nucleus.; [Isoform 7]: Nucleus.; [Isoform 9]: Nucleus.; [Isoform 12]: Nucleus.; Nucleus, PML body. Nucleus, nucleoplasm. Recruited into PML bodies together with TP53.

Expression : High expression is found in testis, spleen, colon and peripheral blood leukocytes. Low expression is found in other tissues.

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