Best Tools for immunology Research

Chk1 Monoclonal Antibody

Catalog No :	YM0153
Reactivity :	Human;Mouse
Applications :	WB;ELISA
Target :	Chk1
Fields :	>>Cell cycle;>>p53 signaling pathway;>>Cellular senescence;>>Human T-cell leukemia virus 1 infection;>>Human immunodeficiency virus 1 infection;>>Viral carcinogenesis
Gene Name :	CHK1
Protein Name :	Serine/threonine-protein kinase Chk1
Human Gene Id :	1111
Human Swiss Prot No :	O14757
Mouse Gene Id :	12649
Mouse Swiss Prot No :	O35280
Immunogen :	Purified recombinant fragment of Chk1 expressed in E. Coli.
Specificity :	Chk1 Monoclonal Antibody detects endogenous levels of Chk1 protein.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Monoclonal, Mouse
Dilution :	WB 1:500 - 1:2000. ELISA: 1:10000. Not yet tested in other applications.
Purification :	Affinity purification
Concentration :	1 mg/ml

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

Molecularweight : 54kD

Cell Pathway : Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;p53;

P References :
1. EMBO J. 1998. 16: 545-554.
2. Science 1998. 282: 1893-1897.

Background : The protein encoded by this gene belongs to the Ser/Thr protein kinase family. It is required for checkpoint mediated cell cycle arrest in response to DNA damage or the presence of unreplicated DNA. This protein acts to integrate signals from ATM and ATR, two cell cycle proteins involved in DNA damage responses, that also associate with chromatin in meiotic prophase I. Phosphorylation of CDC25A protein phosphatase by this protein is required for cells to delay cell cycle progression in response to double-strand DNA breaks. Several alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Oct 2011],

Function : catalytic activity:ATP + a protein = ADP + a phosphoprotein.,domain:The autoinhibitory region (AIR) inhibits the activity of the kinase domain.,function:Required for checkpoint mediated cell cycle arrest in response to DNA damage or the presence of unreplicated DNA. May also negatively regulate cell cycle progression during unperturbed cell cycles. Recognizes the substrate consensus sequence [R-X-X-S/T]. Binds to and phosphorylates CDC25A, CDC25B and CDC25C. Phosphorylation of CDC25A at 'Ser-178' and 'Thr-507' and phosphorylation of CDC25C at 'Ser-216' creates binding sites for 14-3-3 proteins which inhibit CDC25A and CDC25C. Phosphorylation of CDC25A at 'Ser-76', 'Ser-124', 'Ser-178', 'Ser-279' and 'Ser-293' promotes proteolysis of CDC25A. Inhibition of CDC25 activity leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. Binds

Subcellular Location : Nucleus . Chromosome . Cytoplasm . Cytoplasm, cytoskeleton, microtubule organizing center, centrosome . Nuclear export is mediated at least in part by XPO1/CRM1 (PubMed:12676962). Also localizes to the centrosome specifically during interphase, where it may protect centrosomal CDC2 kinase from inappropriate activation by cytoplasmic CDC25B (PubMed:15311285). Proteolytic cleavage at the C-terminus by SPRTN promotes removal from chromatin (PubMed:31316063). .

Expression : Expressed ubiquitously with the most abundant expression in thymus, testis, small intestine and colon.

Sort : 3944

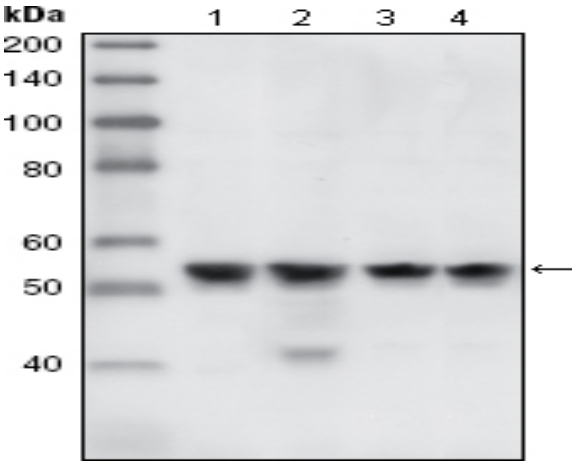
No4 : 1

Best Tools for immunology Research

Host : Mouse

Modifications : Unmodified

Products Images



Western Blot analysis using Chk1 Monoclonal Antibody against A431 (1), HeLa (2), NIH/3T3 (3) and K562 (4) cell lysate.