Chk1 (phospho Ser296) Monoclonal Antibody

Catalog No	BYmab-16618
Isotype	IgG
Reactivity	Human;Rat;Mouse;
Applications	WB
Gene Name	CHEK1
Protein Name	Serine/threonine-protein kinase Chk1
Immunogen	The antiserum was produced against synthesized peptide derived from human Chk1 around the phosphorylation site of Ser296. AA range:266-315
Specificity	Phospho-Chk1 (S296) Monoclonal Antibody detects endogenous levels of Chk1 protein only when phosphorylated at S296.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Monoclonal, Mouse,IgG
Purification	The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB 1:500-2000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	CHEK1; CHK1; Serine/threonine-protein kinase Chk1; CHK1 checkpoint homolog; Cell cycle checkpoint kinase; Checkpoint kinase-1
Observed Band	45kD
Cell Pathway	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). .
Tissue Specificity	Expressed ubiquitously with the most abundant expression in thymus, testis, small intestine and colon.
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
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],
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

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