



## Rabbit Anti-CHK2 antibody

SL11792R

<b>Product Name:</b>	CHK2
<b>Chinese Name:</b>	丝氨酸蛋白激酶1抗体
<b>Alias:</b>	SPK1; CHEK2 homolog; CHK2 homolog; MEC2; RAD53; CHK2_HUMAN; Serine protein kinase 1; Serine-protein kinase 1; Serine/threonine-protein kinase RAD53; CDS1; RAD53.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Sheep,
<b>Applications:</b>	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	61kDa
<b>Cellular localization:</b>	The cell membrane
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated synthetic peptide derived from human Rad53/SPK1:101-200/543
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
<b>PubMed:</b>	<a href="#">PubMed</a>
<b>Product Detail:</b>	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 mutations in TP53. Also, mutations in this gene are thought to confer a predisposition to sarcomas, breast cancer, and brain tumors. This nuclear protein is a member of the CDS1 subfamily of serine/threonine protein kinases. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2012]

**Function:**

Controls S-phase checkpoint as well as G1 and G2 DNA damage checkpoints. Phosphorylates proteins on serine, threonine, and tyrosine. Prevents entry into anaphase and mitotic exit after DNA damage via regulation of the Polo kinase CDC5. Seems to be involved in the phosphorylation of RPH1.

**Subunit:**

Homodimer. Homodimerization is part of the activation process but the dimer may dissociate following activation. Interacts with PML. Interacts with TP53. Interacts with RB1; phosphorylates RB1. Interacts with BRCA1. Interacts (phosphorylated at Thr-68) with MDC1; requires ATM-mediated phosphorylation of CHEK2. Interacts with TP53BP1; modulates CHEK2 phosphorylation at Thr-68 in response to ionizing radiation. Interacts with CDC25A; phosphorylates CDC25A and mediates its degradation in response to ionizing radiation. Interacts with CUL1; mediates CHEK2 ubiquitination and regulation.

**Tissue Specificity:**

Nucleus.

**Post-translational modifications:**

Autophosphorylated.

**Similarity:**

Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CHEK2 subfamily.  
Contains 2 FHA domains.  
Contains 1 protein kinase domain.

**SWISS:**

O96017

**Gene ID:**

11200

**Database links:**

[Entrez Gene: 11200](#) Human

[Entrez Gene: 50883](#) Mouse

[Entrez Gene: 114212](#) Rat

[Omim: 604373](#) Human

[SwissProt: O96017](#) Human

[SwissProt: Q9Z265](#) Mouse

[SwissProt: Q9R019](#) Rat

[Unigene: 291363](#) Human

[Unigene: 505297](#) Human

[Unigene: 279308](#) Mouse

[Unigene: 163213](#) Rat

**Important Note:**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.