

Rabbit CHK2 Polyclonal Antibody | anti-CHK2 antibody

Phospho-CHK2 (Ser33+Ser35) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31398	Rabbit	Human, Mouse, Rat Predicted Reactivity: Bovine (82%)	Western Blot, Immunohistochemistry, Immunofluorescence, Immunocytochemistry, ELISA

PRODUCT SYNONYMS

CHK2; Polyclonal Antibody; Phospho-CHK2 (Ser33+Ser35) Antibody; CDS 1; Cds1; Cds1 homolog; Checkpoint kinase 2; Checkpoint like protein CHK2; CHEK 2; Chek2; Chk 2; CHK2 checkpoint homolog (S. pombe); CHK2 checkpoint homolog; CHK2_HUMAN; hCds1; HuCds 1; LFS 2; LFS2; PP1425; RAD 53; RAD53; Rad53 homolog; Serine/threonine protein kinase Chk2; Serine/threonine-protein kinase Chk2; anti-CHK2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat Predicted Reactivity: Bovine (82%)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Phospho-CHK2 (Ser33+Ser35) Antibody detects endogenous levels of CHK2 only when phosphorylated at Ser33+Ser35. Tissue Specificity: High expression is found in testis, spleen, colon and peripheral blood leukocytes. Low expression is found in other tissues.
Purity/Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho-peptide and non-phospho-peptide affinity columns.
Form/Format	Liquid. Rabbit IgG in phosphate buffered saline, pH7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-CHK2 antibody	WB (Western Blot), IHC (Immunohistochemistry), IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA (Peptide ELISA)
Application Notes	WB: 1:1000-3000 IHC: 1:50-1:200 IF/ICC: 1:100-1:500 Peptide ELISA: 1:20,000-1:40,000
Immunogen	A synthesized peptide derived from human CHK2 around the phosphorylation site of Ser33+Ser35.
Conjugation	Unconjugated
Fragment	Fab fragment
Post Translational Modifications	Phosphorylated. Phosphorylated at Ser-73 by PLK3 in response to DNA damage, promoting phosphorylation at Thr-68 by ATM and the G2/M transition checkpoint. Phosphorylation at Thr-68 induces homodimerization. Autophosphorylates at Thr-383 and Thr-387 in the T-loop/activation segment upon dimerization to become fully active and phosphorylate its substrates like for instance CDC25C. DNA damage-induced autophosphorylation at Ser-379 induces CUL1-mediated ubiquitination and regulates the pro-apoptotic function. Phosphorylation at Ser-456 also regulates ubiquitination. Phosphorylated by PLK4. Ubiquitinated. CUL1-mediated ubiquitination regulates the pro-apoptotic function. Ubiquitination may also regulate protein stability. Ubiquitinated by RNF8 via 'Lys-48'-linked ubiquitination.

Subunit Structure	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. Interacts with CDKN2AIP. Interacts (via protein kinase domain) with CCAR2 (via N-terminus). Interacts with SIRT1.
Similarity	Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CHK2 subfamily.
Subcellular Location	Nucleus. Note: Isoform 10 is present throughout the cell.Nucleus. Nucleus. Nucleus. Nucleus. Nucleus>PML body. Nucleus>Nucleoplasm. Note: Recruited into PML bodies together with TP53.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



Application Data

At 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/200 staining Human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/200 staining Mouse heart tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



IHC (Immunohistochemistry)

At 1/200 staining Rat lung tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary antibody.



WB (Western Blot)

Western blot analysis of CHK2 (Phospho-Ser33+Ser35) using Jurkat whole cell lysates.-/+ means absence or presence of N peptide(¼ non-phospho peptide) and P peptide(phospho peptide).



WB (Western Blot)

Western blot analysis of extracts from Mouse heart, using Phospho-CHK2 (Ser33+Ser35) Antibody. The lane on the left was treated with blocking peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-CHK2 antibody

Serine/threonine-protein kinase which is required for checkpoint-mediated cell cycle arrest, activation of DNA repair and apoptosis in response to the presence of DNA double-strand breaks. May also negatively regulate cell cycle progression during unperturbed cell cycles. Following activation, phosphorylates numerous effectors preferentially at the consensus sequence [L-X-R-X-X-S/T]. Regulates cell cycle checkpoint arrest through phosphorylation of CDC25A, CDC25B and CDC25C, inhibiting their activity. Inhibition of CDC25 phosphatase activity leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. May also phosphorylate NEK6 which is involved in G2/M cell cycle arrest. Regulates DNA repair through phosphorylation of BRCA2, enhancing the association of RAD51 with chromatin which promotes DNA repair by homologous recombination. Also stimulates the transcription of genes involved in DNA repair (including BRCA2) through the phosphorylation and activation of the transcription factor FOXM1. Regulates apoptosis through the phosphorylation of p53/TP53, MDM4 and PML. Phosphorylation of p53/TP53 at 'Ser-20' by CHEK2 may alleviate inhibition by MDM2, leading to accumulation of active p53/TP53. Phosphorylation of MDM4 may also reduce degradation of p53/TP53. Also controls the transcription of pro-apoptotic genes through phosphorylation of the transcription factor E2F1. Tumor suppressor, it may also have a DNA damage-independent function in mitotic spindle assembly by phosphorylating BRCA1. Its absence may be a cause of the chromosomal instability observed in some cancer cells. Promotes the CCAR2-SIRT1 association and is required for CCAR2-mediated SIRT1 inhibition.

NCBI AND UNIPROT INFORMATION

NCBI GI #	54112407
NCBI GeneID	11200
NCBI Accession #	NP_001005735.1
NCBI GenBank Nucleotide #	NM_001005735.1
UniProt Accession #	O96017; Q6QA03; Q6QA04; Q6QA05; Q6QA06; Q6QA07; Q6QA08; Q6QA10; A8K3Y9; B7ZBF3; B7ZBF4; B7ZBF5
Molecular Weight	60,915 Da
NCBI Official Full Name	serine/threonine-protein kinase Chk2 isoform c
NCBI Official Synonym Full Names	checkpoint kinase 2
NCBI Official Symbol	CHEK2
NCBI Official Synonym Symbols	CDS1; CHK2; LFS2; RAD53; hCds1; HuCds1; PP1425
NCBI Protein Information	serine/threonine-protein kinase Chk2; cds1 homolog; CHK2 checkpoint homolog; checkpoint-like protein CHK2
UniProt Protein Name	Serine/threonine-protein kinase Chk2
UniProt Gene Name	CHEK2
UniProt Synonym Gene Names	CDS1; CHK2; RAD53; Hucds1; hCds1
UniProt Entry Name	CHK2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/chk2-antibody-western-blot-immunohistochemistry-immunofluorescence-immunocytochemistry-peptide-elisa-elisa/31398>