

# Anti-CHK2 (pT383) Antibody

Rabbit polyclonal antibody to CHK2 (pT383)

Catalog # AP60250

## Product Information

Application	WB, IF/IC
Primary Accession	<a href="#">Q96017</a>
Other Accession	<a href="#">Q9Z265</a>
Reactivity	Human, Mouse, Rat, Pig, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60915

## Additional Information

Gene ID	11200
Other Names	CDS1; CHK2; RAD53; Serine/threonine-protein kinase Chk2; CHK2 checkpoint homolog; Cds1 homolog; Hucds1; hCds1; Checkpoint kinase 2
Target/Specificity	Recognizes endogenous levels of CHK2 (pT383) protein.
Dilution	WB~~WB (1/500 - 1/1000), IF/IC (1/100 - 1/500) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

## Protein Information

Name	CHEK2 ( <a href="#">HGNC:16627</a> )
Synonyms	CDS1, CHK2, RAD53
Function	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] (PubMed: <a href="#">37943659</a> ). 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 (PubMed:[25361978](#)). Under oxidative stress, promotes ATG7 ubiquitination by phosphorylating the E3 ubiquitin ligase TRIM32 at 'Ser-55' leading to positive regulation of the autophagosome assembly (PubMed:[37943659](#)).

#### Cellular Location

[Isoform 2]: Nucleus. Note=Isoform 10 is present throughout the cell [Isoform 7]: Nucleus. [Isoform 12]: Nucleus.

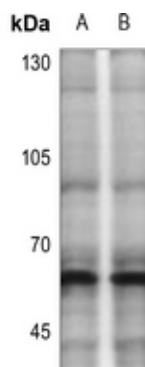
#### Tissue Location

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

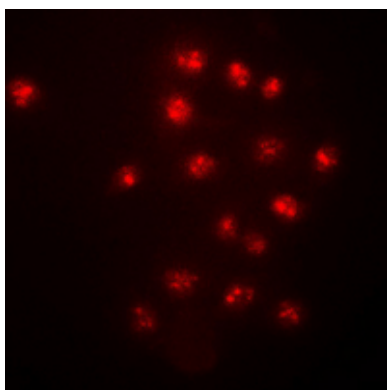
## Background

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human CHK2 (pT383). The exact sequence is proprietary.

## Images



Western blot analysis of CHK2 (pT383) expression in HEK293T (A), HEK293T-UV-30min (B) whole cell lysates.



Immunofluorescent analysis of CHK2 (pT383) staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).