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# Anti-CHK2 (Phospho-T432) Antibody

Catalog # AP59946

## Product Information

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|---|---|
| **Application** | WB |
| **Primary Accession** | O96017 |
| **Reactivity** | Human, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 60915 |

## Additional Information

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|---|---|
| **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** | KLH-conjugated synthetic phosphopeptide corresponding to residues surrounding T432 of human CHK2 protein. The exact sequence is proprietary. |
| **Dilution** | WB~~WB (1/500 - 1/1000) |
| **Format** | Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide. |
| **Storage** | Store at -20 °C.Stable for 12 months from date of receipt |

## Protein Information

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|---|---|
| **Name** | CHEK2 ( HGNC:16627) |
| **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:37943659). 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 autophagosme assembly (PubMed:37943659).

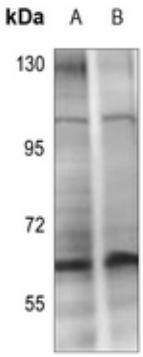
**Cellular Location**

[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

## Images




Western blot analysis of CHK2 (Phospho-T432) expression in HepG2 (A), SGC7901 (B) whole cell lysates. (Predicted band size: 60 kD; Observed band size: 62 kD)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.