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Anti-Phospho-Chk2 (T68) Rabbit Monoclonal Antibody

Catalog # ABO16195

Product Information

Application	WB, IP
Primary Accession	O96017
Host	Rabbit
Isotype	IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-Phospho-Chk2 (T68) Rabbit Monoclonal Antibody . Tested in WB, IP applications. This antibody reacts with Human.

Additional Information

Gene ID	11200
Other Names	Serine/threonine-protein kinase Chk2, 2.7.11.1, CHK2 checkpoint homolog, Cds1 homolog, Hucds1, hCds1, Checkpoint kinase 2, CHEK2 (HGNC:16627), CDS1, CHK2, RAD53
Calculated MW	60915
Application Details	WB 1:500-1:2000 IP 1:50
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 27C74
Immunogen	A synthesized peptide derived from human Phospho-Chk2 (T68)
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

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).

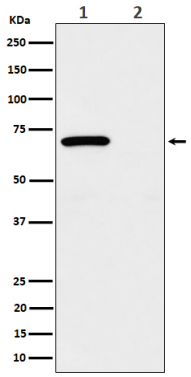
Cellular Location

[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 Phospho-Chk2 (T68) expression in (1) 293 treated with UV and Untreated cell lysate; (2) Untreated.

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