10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Phospho-Chk2 (Ser516) Antibody

Catalog # ABV11995

Product Information

Application	WB, E
Primary Accession	O96017
Reactivity	Human, Monkey
Host	Rabbit
Isotype	Rabbit IgG
Calculated MW	60915

Additional Information

Gene ID	11200
Positive Control	WB: COS 7 cell lysate
Application & Usage	WB 1:500-1:2000; E 1:10000
Other Names	Serine/threonine-protein kinase Chk2, CHK2 checkpoint homolog, Cds1 homolog, Hucds1, hCds1, Checkpoint kinase 2, CHEK2
Target/Specificity	CHEK2
Antibody Form	Liquid
Appearance	Colorless liquid
Handling	The antibody solution should be gently mixed before use
Reconstitution & Storage	-20°C
Background Descriptions	
Precautions	Phospho-Chk2 (Ser516) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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).

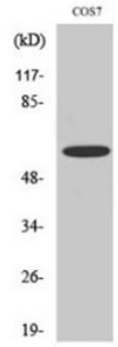
Cellular Location

[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



WB analysis of COS7 cells using Phospho-Chk2 (S516) Polyclonal Antibody

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