

Datasheet for ABIN7179991
anti-CHEK2 antibody (Thr68)



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2 Images

Overview

Quantity:	100 µL
Target:	CHEK2
Binding Specificity:	Thr68
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CHEK2 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC)

Product Details

Immunogen:	Synthesized non-phosphopeptide derived from Human Chk2 around the phosphorylation site of threonine 68.
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Target Details

Target:	CHEK2
Alternative Name:	CHEK2 (CHEK2 Products)

Target Details

Background: Background: 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.

Bhoumik A, et al. (2005) Mol Cell, 18(5): 577-87.

Gorgoulis VG, et al. (2005) Nature, 434(7035): 907-13.

Falck J, et al. (2005) Nature, 434(7033): 605-11.

Jin ZH, et al. (2005) Oncogene, 24(12): 1973-81.

Li J, et al. (2005) J Biol Chem, 280(12): 12041-50.

Aliases: CDS 1 antibody, Cds1 antibody, Cds1 homolog antibody, Checkpoint kinase 2 antibody, Checkpoint like protein CHK2 antibody, CHEK 2 antibody, Chk2 antibody, Chk 2 antibody, CHK2 checkpoint homolog (S. pombe) antibody, CHK2 checkpoint homolog antibody, CHK2_HUMAN antibody, hCds1 antibody, HuCds 1 antibody, LFS 2 antibody, LFS2 antibody, PP1425 antibody, RAD 53 antibody, RAD53 antibody, Rad53 homolog antibody, Serine/threonine protein kinase Chk2 antibody, Serine/threonine-protein kinase Chk2 antibody

UniProt: [O96017](#)

Pathways: [p53 Signaling](#), [Apoptosis](#), [Cell Division Cycle](#)

Application Details

Application Notes: WB:1:500-1:3000, IHC:1:50-1:100,

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: Rabbit IgG in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.

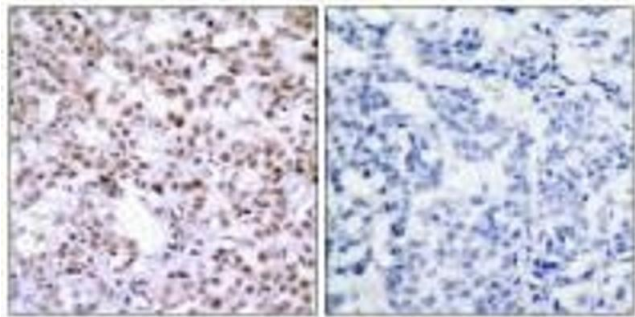
Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Storage: -20 °C,-80 °C

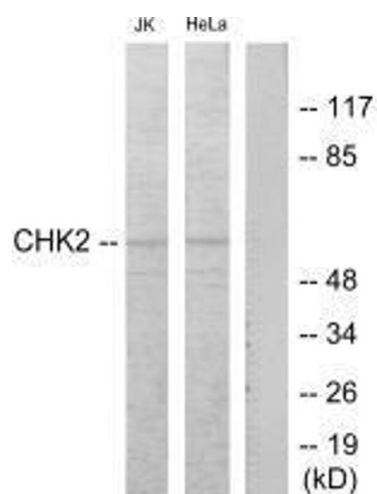
Storage Comment: Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

Images



Immunohistochemistry

Image 1. Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using Chk2 (Ab-68) antibody.



Western Blotting

Image 2. Western blot analysis of extracts from Jurkat and HeLa cells treated with etoposide 25uM 24hours, using Chk2 (Ab-68) antibody.