Product Name: **Chk2 Rabbit Polyclonal Antibody**
Catalog #: **APRab08765**
For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Molecular Weight	61kDa

Antigen Information

Gene Name	CHEK2
Alternative Names	CHEK2; CDS1; CHK2; RAD53; Serine/threonine-protein kinase Chk2; CHK2 checkpoint homolog; Cds1 homolog; Hucds1; hCds1; Checkpoint kinase 2
Gene ID	11200.0
SwissProt ID	O96017
Immunogen	The antiserum was produced against synthesized peptide derived from human CHEK2. AA range:35-84

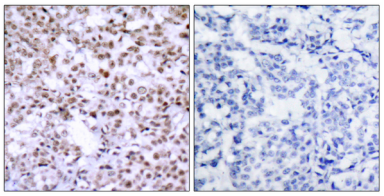
Background

In response to DNA damage and replication blocks, cell cycle progression is halted through the control of critical cell cycle regulators. The protein encoded by this gene is a cell cycle checkpoint regulator and putative tumor suppressor. It contains a forkhead-associated protein interaction domain essential for activation in response to DNA damage and is rapidly phosphorylated in response to replication blocks and DNA damage. When activated, the encoded protein is known to inhibit CDC25C phosphatase, preventing entry into mitosis, and has been shown to stabilize the tumor suppressor protein p53, leading to cell cycle arrest in G1. In addition, this protein interacts with and phosphorylates BRCA1, allowing BRCA1 to restore survival after DNA damage. Mutations in this gene have been linked with Li-Fraumeni syndrome, a highly penetrant familial cancer phenotype usually associated with inherited mutaticatalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,disease:Defects in CHEK2 are associated with Li-Fraumeni syndrome 2 (LFS2) [MIM:609265]; a highly penetrant familial cancer phenotype usually associated with inherited mutations in p53/TP53.,disease:Defects in CHEK2 are found in some patients with osteosarcoma (OSRC) [MIM:259500].,disease:Defects in CHEK2 are found in some patients with prostate cancer (CaP) [MIM:176807].,enzyme regulation:Rapidly phosphorylated on Thr-68 by MLTK in response to DNA damage and to replication block. Kinase activity is also up-regulated by autophosphorylation.,function:Regulates cell cycle checkpoints and apoptosis in response to DNA damage, particularly to DNA double-strand breaks. Inhibits CDC25C phosphatase by phosphorylation on 'Ser-216', preventing the entry into mitosis. May also play a role in meiosis. Regulates the TP53 tumor suppressor through phosphorylation at 'Thr-18' and 'Ser-20'.,similarity:Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CHK2 subfamily.,similarity:Contains 1 FHA domain.,similarity:Contains 1 protein kinase domain.,subcellular location:Isoform 10 is present throughout the cell.,tissue specificity:High expression is found in testis, spleen, colon and peripheral blood leukocytes. Low expression is found in other tissues.,

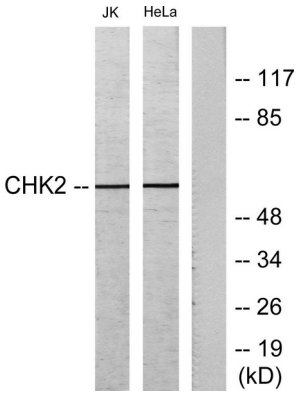
Research Area

Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;p53;

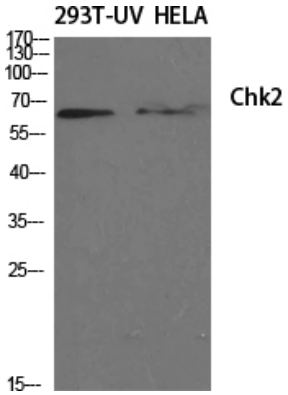
Image Data



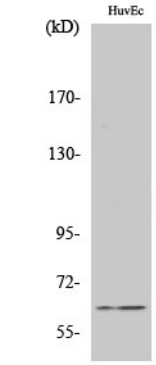
Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using Chk2 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from Jurkat and HeLa cells treated with etoposide 25uM 24hours, using Chk2 Antibody. The lane on the right is blocked with the synthesized peptide.



Western Blot analysis of various cells using Chk2 Polyclonal Antibody diluted at 1: 500.



Western Blot analysis of HuvEc cells using Chk2 Polyclonal Antibody diluted at 1: 50 0.