Product Name: Chk2 (phospho Thr383) Rabbit Polyclonal Antibody
Catalog #: APRab04458

Summary

Production Name	Chk2 (phospho Thr383) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	ELISA,IF,WB,
Reactivity	Human,Mouse,Rat,Monkey

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

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.The antiserum was produced against synthesized peptide derived from human Chk2 around the phosphorylation site of Thr383. AA range:356-405

Application

Dilution Ratio	WB 1:500 - 1:2000 IF 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications.

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Molecular Weight	60kD

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

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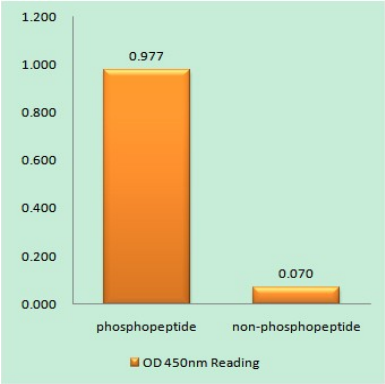
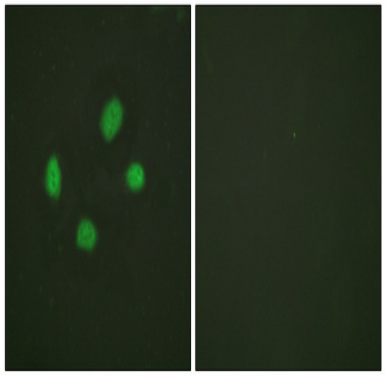
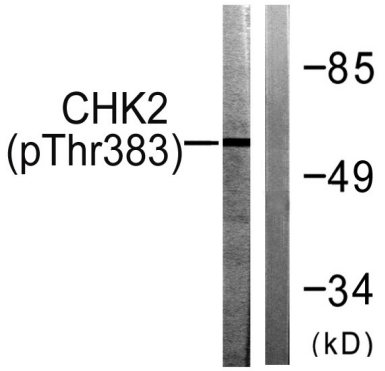


Enzyme-Linked Immunosorbent Assay （Phospho-ELISA） for Immunogen Phosphopeptide （Phospho-left） and Non-Phosphopeptide （Phospho-right）, using Chk2 （Phospho-Thr383） Antibody



Immunofluorescence analysis of HeLa cells, using Chk2 （Phospho-Thr383） Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from COS7 cells treated with UV 30 ', using Chk2 （Phospho-Thr383） Antibody. The lane on the right is blocked with the phospho peptide.

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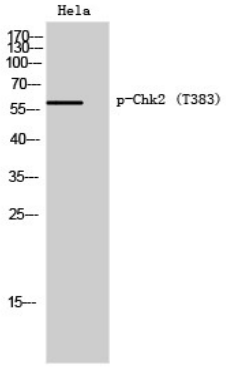

Western Blot analysis of Hela cells using Phospho-Chk2 （T383） Polyclonal Antibody diluted at 1：1000 cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit （SC-003,Inventbiotech,MN,USA）.

Note

For research use only.