



Chk2 Rabbit mAb

Catalog No	YP-rAb-17934
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	CHEK2
Protein Name	Serine/threonine-protein kinase Chk2
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:1000-1:5000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200, Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15 ° C to -25 ° C/1 year(Do not lower than -25 ° C)
Synonyms	Chk2;Serine/threonine-protein kinase Chk2;CHEK2 ; CDS1 ; CHK2 ; RAD53 ; Serine/threonine-protein kinase Chk2 ; CHK2 checkpoint homolog ; Cds1 homolog ; Hucds1 ; hCds1 ; Checkpoint kinase 2;CHEK2
Observed Band	61kD
Calculated Molecular Weight	61kD
Cell Pathway	Nucleus
Tissue Specificity	High expression is found in testis, spleen, colon and peripheral blood leukocytes. Low expression is found in other tissues.
Function	Catalytic 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.

Background

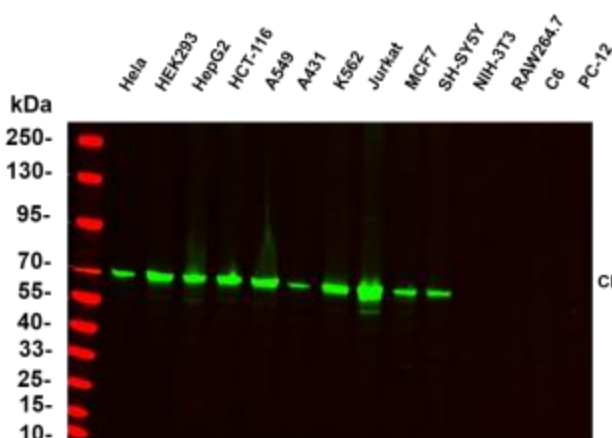
In response to DNA damage and replication blocks, cell cycle progression is halted through the control of critical cell cycle regulators. The protein encoded by this gene is a cell cycle checkpoint regulator and putative tumor suppressor. It contains a forkhead-associated protein interaction domain essential 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 mutations.

matters needing attention

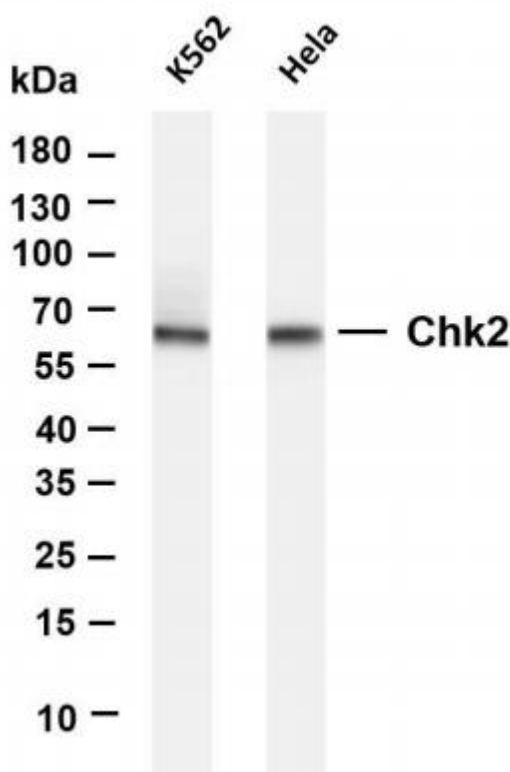
Avoid repeated freezing and thawing!

Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

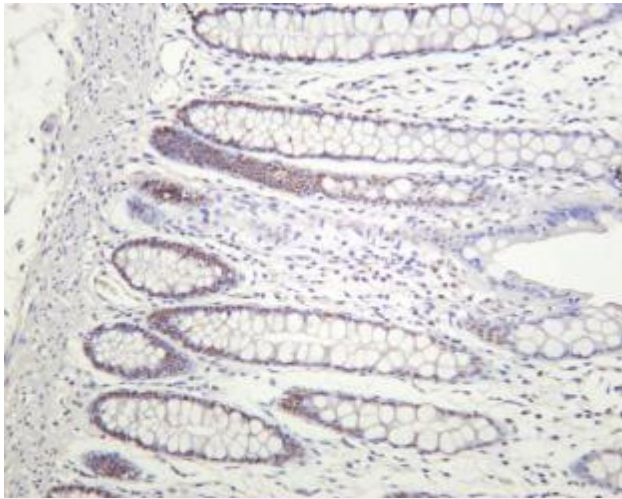


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the primary antibody was used at 4~C, over night with a 1:5000 dilution. The Dylight 800-conjugated Goat anti-Rabbit antibody

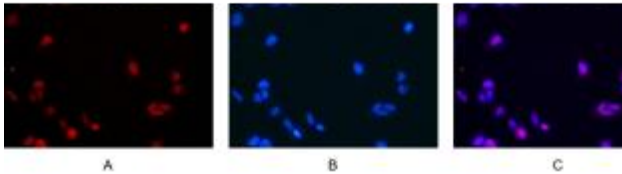


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-Chk2 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: K562 Lane 2: Hela Predicted band size: 61kDa Observed band size: 61kDa





Human colon was stained with anti-Chk2 rabbit antibody



Immunofluorescence analysis of HEK293. Picture A: Chk2 antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

