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Product datasheet for CF500398

Chk2 (CHEK2) Mouse Monoclonal Antibody [Clone ID: OTI5C4]

Product data:

Product Type:	Primary Antibodies
Clone Name:	OTI5C4
Applications:	FC, IF, IHC, IP, WB
Recommended Dilution:	WB 1:500~1000, IHC 1:150, IF 1:50~100, FLOW 1:100, IP 2ug/500ul
Reactivity:	Human, Dog, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Full length human recombinant protein of human CHEK2 (NP_009125) produced in HEK293T cell.
Formulation:	Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)
Reconstitution Method:	For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific)
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	60.7 kDa
Gene Name:	checkpoint kinase 2
Database Link:	NP_009125 Entrez Gene 50883 MouseEntrez Gene 114212 RatEntrez Gene 486338 DogEntrez Gene 11200 Human O96017

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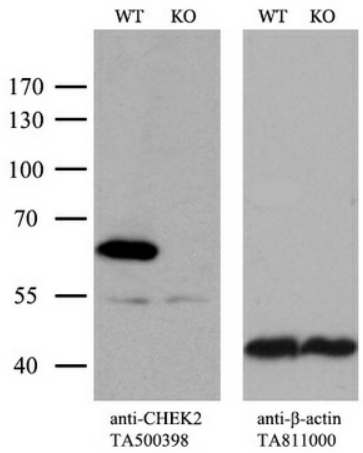
Background: In response to DNA damage and replication blocks, cell cycle progression is halted through the control of critical cell cycle regulators. The protein encoded by this gene is a cell cycle checkpoint regulator and putative tumor suppressor. It contains a forkhead-associated protein interaction 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 in TP53. Also, mutations in this gene are thought to confer a predisposition to sarcomas, breast cancer, and brain tumors. This nuclear protein is a member of the CDS1 subfamily of serine/threonine protein kinases. Three transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq]

Synonyms: CDS1; CHK2; hCds1; HuCds1; LFS2; PP1425; RAD53

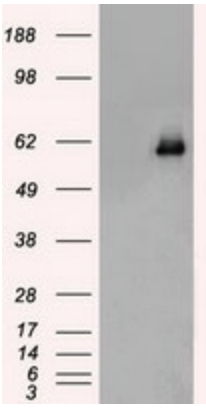
Protein Families: Druggable Genome, Protein Kinase, Stem cell - Pluripotency

Protein Pathways: Cell cycle, p53 signaling pathway

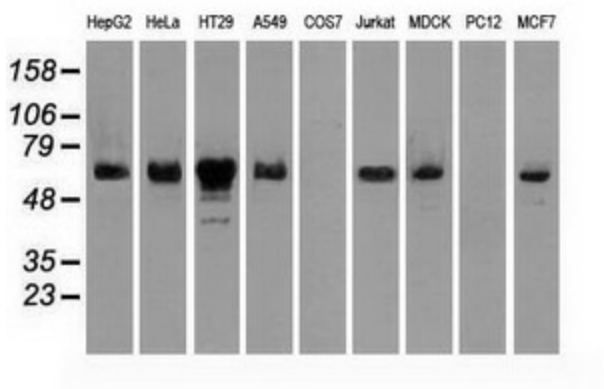
Product images:



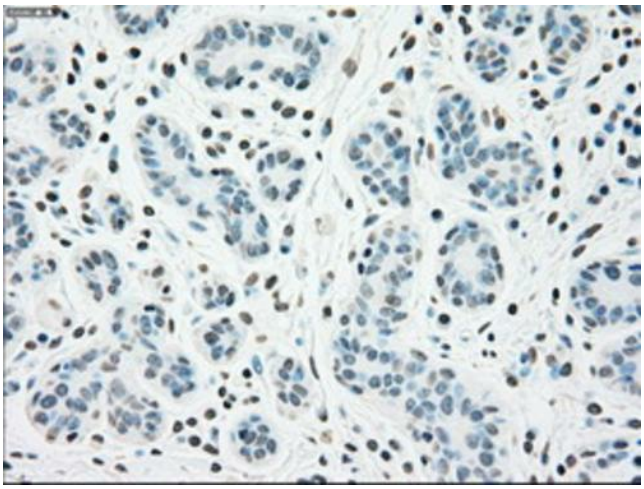
Equivalent amounts of cell lysates (10 ug per lane) of wild-type HeLa cells (WT, Cat# LC810HELA) and CHEK2-Knockout hela cells (KO, Cat# [LC810324]) were separated by SDS-PAGE and immunoblotted with anti-CHEK2 monoclonal antibody [TA500398]. Then the blotted membrane was stripped and reprobed with anti-β-actin ([TA811000]) as a loading control (1:500).



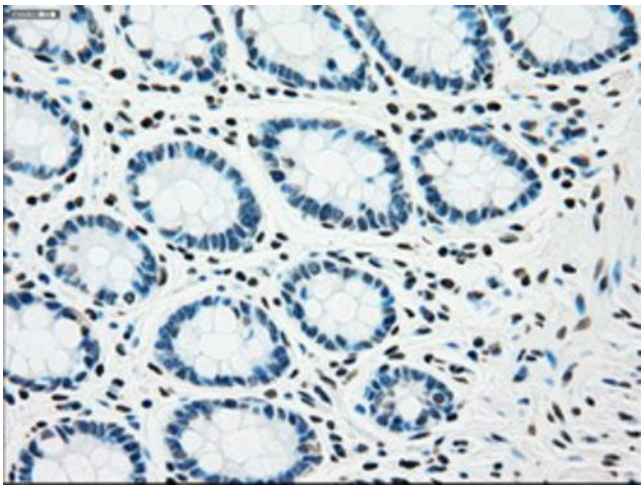
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CHEK2 (Cat# [RC201278], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CHEK2(Cat# [TA500398]). Positive lysates [LY416128] (100ug) and [LC416128] (20ug) can be purchased separately from OriGene.



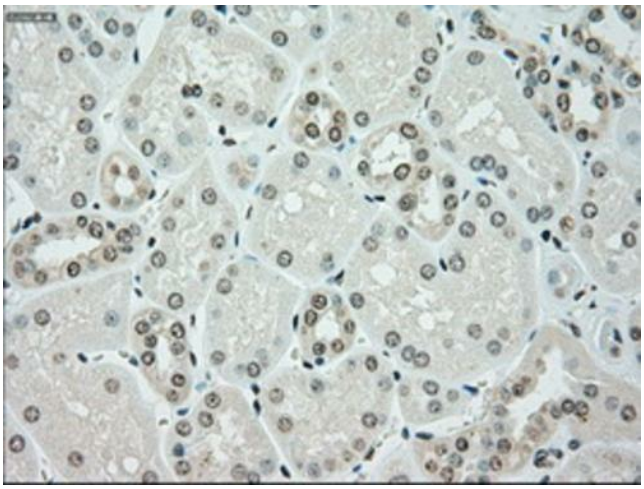
Western blot analysis of extracts (35ug) from 9 different cell lines by usin g anti-CHEK2 monoclonal antibody (HepG2: human; HeLa: human; SVT2: mouse; A549: human; COS7: monkey; Jurkat: human; MDCK: canine; PC12: rat; MCF7: human).



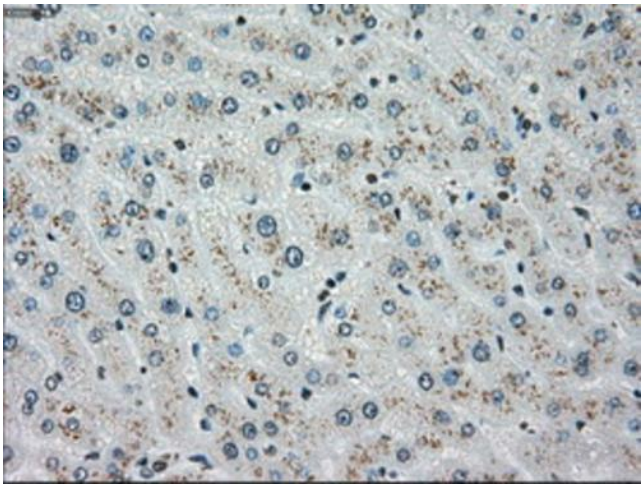
Immunohistochemical staining of paraffin-embedded Human breast tissue within the normal limits using anti-CHEK2 mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.



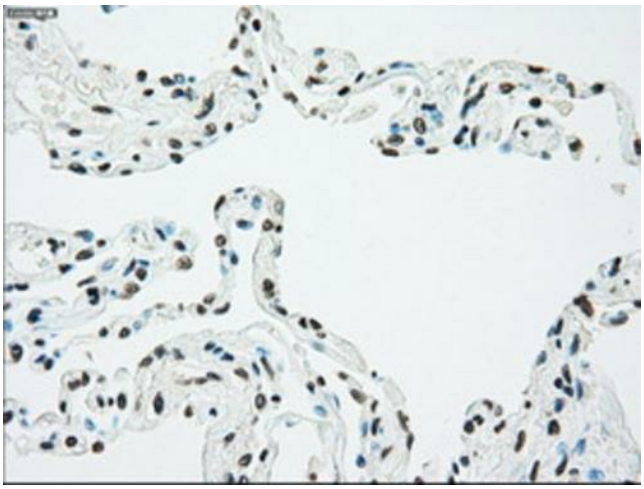
Immunohistochemical staining of paraffin-embedded Human colon tissue within the normal limits using anti-CHEK2 mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.



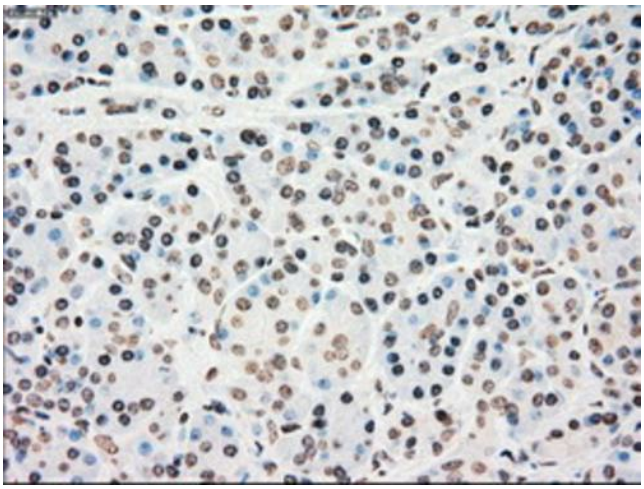
Immunohistochemical staining of paraffin-embedded Human Kidney tissue within the normal limits using anti-CHEK2 mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.



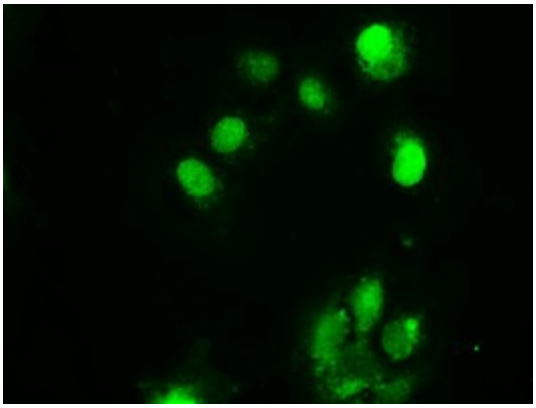
Immunohistochemical staining of paraffin-embedded Human liver tissue within the normal limits using anti-CHEK2 mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.



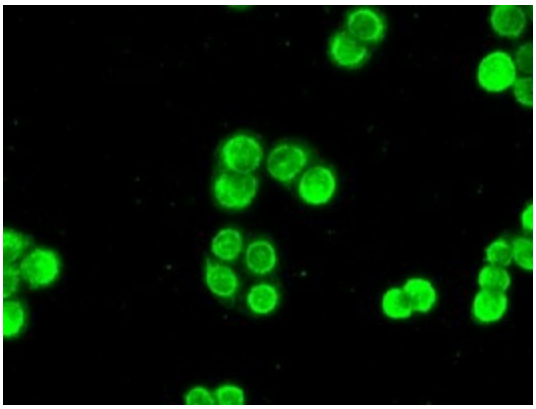
Immunohistochemical staining of paraffin-embedded Human lung tissue within the normal limits using anti-CHEK2 mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.



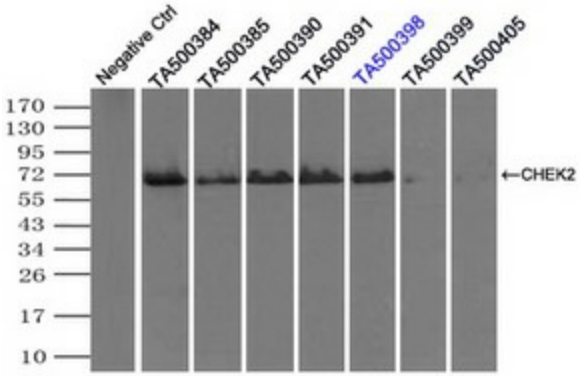
Immunohistochemical staining of paraffin-embedded Human pancreas tissue within the normal limits using anti-CHEK2 mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.



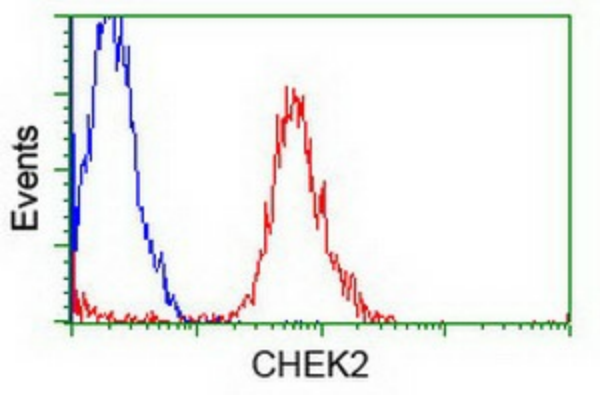
Anti-CHEK2 mouse monoclonal antibody ([TA500398]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY CHEK2 ([RC201278]).



Immunofluorescent staining of HT29 cells using anti-CHEK2 mouse monoclonal antibody ([TA500398]).



Immunoprecipitation (IP) of CHEK2 by using TrueMab monoclonal anti-CHEK2 antibodies (Negative control: IP without adding anti-CHEK2 antibody.). For each experiment, 500ul of DDK tagged CHEK2 overexpression lysates (at 1:5 dilution with HEK293T lysate), 2ug of anti-CHEK2 antibody and 20ul (0.1mg) of goat anti-mouse conjugated magnetic beads were mixed and incubated overnight. After extensive wash to remove any non-specific binding, the immuno-precipitated products were analyzed with rabbit anti-DDK polyclonal antibody.



Flow cytometric Analysis of Jurkat cells, using anti-CHEK2 antibody ([TA500398]), (Red), compared to a nonspecific negative control antibody, (Blue).