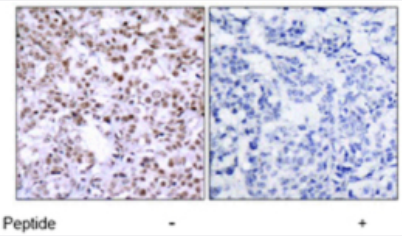
CHEK2 polyclonal antibody

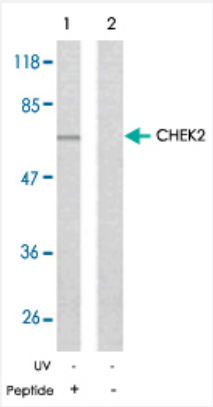
Catalog # PAB5293 Size 100 ug

Applications



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using CHEK2 polyclonal antibody (Cat # PAB5293) .



Western Blot (Cell lysate)

Western blot analysis of the extracts from Jurkat cells using CHEK2 polyclonal antibody (Cat # PAB5293) .

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of CHEK2.
Immunogen	A synthetic peptide corresponding to residues surrounding T68 of human CHEK2.
Host	Rabbit
Reactivity	Human, Mouse, Rat
Form	Liquid
Quality Control Testing	Antibody Reactive Against Synthetic Peptide.

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Recommend Usage	Immunohistochemistry (1:50-1:100) Western Blot (1:500-1:1000) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS, 150 mM NaCl, pH 7.4 (50% glycerol, 0.02% sodium azide)
Storage Instruction	Store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which shoul d be handled by trained staff only.

Applications

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

  Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using CHEK2 polyclonal antibody (Cat # PAB5293) .

- Western Blot (Cell lysate)

  Western blot analysis of the extracts from Jurkat cells using CHEK2 polyclonal antibody (Cat # PAB5293) .

Gene Info — CHEK2

Entrez GeneID	11200
Gene Name	CHEK2
Gene Alias	CDS1, CHK2, HuCds1, LFS2, PP1425, RAD53
Gene Description	CHK2 checkpoint homolog (S. pombe)
Omim ID	114480 176807 259500 604373 609265
Gene Ontology	Hyperlink

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Gene Summary	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
Other Designations	OTTHUMP00000028871|checkpoint-like protein CHK2|protein kinase CHK2|serine/threonine-protein kinase CHK2

Publication Reference

- ATM-dependent phosphorylation of ATF2 is required for the DNA damage response.

  Bhoumik A, Takahashi S, Breitweiser W, Shiloh Y, Jones N, Ronai Z.

  Molecular Cell 2005 May; 18(5):577.

- Activation of the DNA damage checkpoint and genomic instability in human precancerous lesions.

  Gorgoulis VG, Vassiliou LV, Karakaidos P, Zacharatos P, Kotsinas A, Liloglou T, Venere M, Ditullio RA Jr, Kastrinakis NG, Levy B, Kletsas D, Yoneta A, Herlyn M, Kittas C, Halazonetis TD.

  Nature 2005 Apr; 434(7035):907.

- Conserved modes of recruitment of ATM, ATR and DNA-PKcs to sites of DNA damage.

  Falck J, Coates J, Jackson SP.

  Nature 2005 Mar; 434(7033):605.

  Application: WB, Human, NBS-lLB1 cells

Pathway

- Cell cycle
- p53 signaling pathway

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Disease

- Adenocarcinoma
- Adenoma
- Ataxia telangiectasia
- Atherosclerosis
- Barrett Esophagus
- Brain Neoplasms
- Breast cancer
- Breast Neoplasms
- Carcinoma
- Cell Transformation
- Colon cancer
- Colonic Neoplasms
- Colorectal Neoplasms
- DNA Damage
- Endometrial Neoplasms
- Esophageal Neoplasms
- Genetic Predisposition to Disease
- Glioma
- Head and Neck Neoplasms
- Hypertension
- Kidney Diseases
- Kidney Failure
- Kidney Neoplasms
- Laryngeal Neoplasms

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- Leukemia
- Lung Neoplasms
- Malignant melanoma
- Melanoma
- Meningeal Neoplasms
- Meningioma
- Mouth Neoplasms
- Neoplasm Invasiveness
- Neoplasm Metastasis
- Neoplasm Recurrence
- Neoplasms
- Neoplastic Syndromes
- Neuroma
- Ovarian cancer
- Ovarian Neoplasms
- Pancreatic cancer
- Pancreatic Neoplasms
- Pharyngeal Neoplasms
- Prostate cancer
- Prostatic Neoplasms
- Pulmonary Disease
- Skin Neoplasms
- Urinary Bladder Neoplasms
- Werner syndrome

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