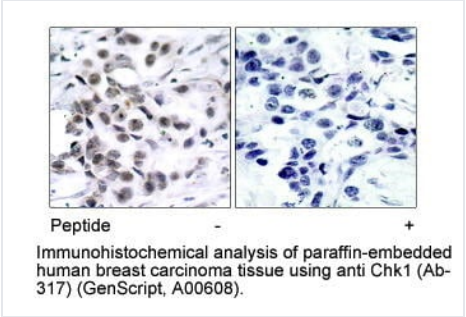
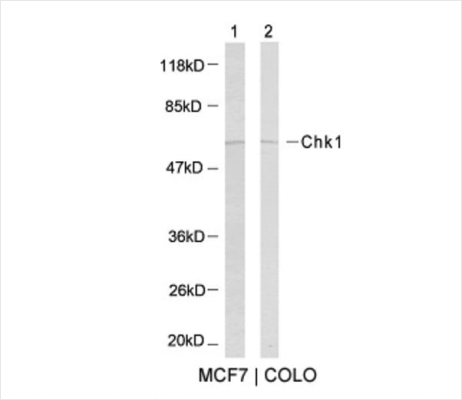
# CHEK1 Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | Chk1 (CHEK1), Polyclonal Antibody |
| **Full Product Name** | Chk1 (CHEK1, Cell Cycle Checkpoint Kinase) |
| **Product Gene Name** | anti-CHEK1 antibody |
| **Product Synonym Names** | Anti -Chk1 (CHEK1, Cell Cycle Checkpoint Kinase) |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS (without Mg2+ and Ca2+), pH 7.4, 150mM sodium chloride, 0.02% sodium azide and 50% glycerol. |
| **Purity/Purification** | Affinity Purified<br>Purified by immunoaffinity chromatography. |
| **Specificity** | Detects endogenous levels of total human Chk1 protein. |
| **Preparation and Storage** | -20 degree C |
| **Molecular Weight** | 54,434 Da |
| **Chromosome Location** | Chromosome: 11; NC_000011.9 (125495036..125546150). Location: 11q24.2 |
| **OMIM** | 603078 |
| **3D Structure** | ModBase 3D Structure for O14757 |
| **Immunogen** | Synthesized non-phosphopeptide derived from human Chk1 around the phosphorylation site of serine 317 (S-S-SP-Q-P) |
| **Product Categories/Family for anti-CHEK1 antibody** | Antibodies; Abs to Cancer Markers |
| **Applications Tested/Suitable for anti-CHEK1 antibody** | Western Blot (WB), Immunohistochemistry (IHC) |
| **Application Notes for anti-CHEK1 antibody** | Suitable for use in Western Blot and Immunohistochemistry.<br>Dilution: Western Blot: 1:500-1:1000<br>Immunohistochemistry: 1:50-1:100<br><br>Storage and Stability:<br>For long-term storage, aliquot and store at -20 degree C. Aliquots are stable for at least 12 months at -20 degree C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer. |
| **Related Product Information for anti-CHEK1 antibody** | MBS619391 is an antibody targeting CHEK1. Also known as Chk1 (CHEK1, Cell Cycle Checkpoint Kinase). Reactive in Human. Host: Rabbit. |
| **Other Notes** | Small volumes of anti-CHEK1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |




**Immunohistochemistry (IHC) of anti-CHEK1 antibody**
Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using MBS619391.




**Western Blot (WB) of anti-CHEK1 antibody**
Western Blot using MBS619391.

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CHEK1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 2367669 |
| **NCBI GeneID** | 1111 |
| **UniProt Primary Accession #** | O14757 |
| **UniProt Secondary Accession #** | A8K934 |
| **UniProt Related Accession #** | O14757; Q6W8P8 |
| **NCBI Official Full Name** | Chk1 |
| **NCBI Official Synonym Full Names** | CHK1 checkpoint homolog (S. pombe) |
| **NCBI Official Symbol** | CHEK1 |
| **NCBI Official Synonym Symbols** | CHK1 |
| **UniProt Protein Name** | Serine/threonine-protein kinase Chk1 |
| **Protein Family** | Serine/threonine-protein kinase |
| **UniProt Gene Name** | CHEK1 |
| **UniProt Synonym Gene Names** | CHK1 |
| **UniProt Entry Name** | CHK1_HUMAN |
| **NCBI Protein Information** | serine/threonine-protein kinase Chk1; OTTHUMP00000231300; OTTHUMP00000231301; OTTHUMP00000231306; OTTHUMP00000231307; OTTHUMP00000231309; Checkpoint, S. pombe, homolog of, 1 |
| **NCBI Summary for CHEK1** | The protein encoded by this gene belongs to the Ser/Thr protein kinase family. It is required for checkpoint mediated cell cycle arrest in response to DNA damage or the presence of unreplicated DNA. This protein acts to integrate signals from ATM and ATR, two cell cycle proteins involved in DNA damage responses, that also associate with chromatin in meiotic prophase I. Phosphorylation of CDC25A protein phosphatase by this protein is required for cells to delay cell cycle progression in response to double-strand DNA breaks. Several alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Oct 2011] |

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| **UniProt Comments for CHEK1** | Chk1: a protein kinase of the CAMKL family. Required for checkpoint mediated cell cycle arrest in response to DNA damage or the presence of unreplicated DNA. May also negatively regulate cell cycle progression during unperturbed cell cycles. Plays an important role in both S and G2 checkpoints, embryonic development and tumor suppression. Phosphorylated and activated by ATM/ATR following DNA damage, it binds to single-stranded DNA and DNA ends and has a role in the repair of double strand breaks. Activated Chk1 can phosphorylate and inactivate cdc25C via phosphorylation and 14-3-3 binding, blocking the activation of cdc2 and transition into M-phase. Other substrates include p53. Implicated in resistance to apoptosis in response to chemotherapy. Inhibitors under development to chemosensitize tumors. Somatic mutations found in stomach tumors, and in colon and endometrial tumors, where CHK1 may be a target of microsatellite instability. Inhibitors: SB218078, UNC-01.<br><br>Protein type: Protein kinase, Ser/Thr (non-receptor); Kinase, protein; Protein kinase, CAMK; Tumor suppressor; EC 2.7.11.1; CAMK group; CAMKL family; CHK1 subfamily<br><br>Chromosomal Location of Human Ortholog: 11q24.2<br><br>Cellular Component: nucleoplasm; extracellular space; centrosome; chromosome, telomeric region; condensed nuclear chromosome; intracellular membrane-bound organelle; replication fork; chromatin; cytosol; nucleus<br><br>Molecular Function: protein serine/threonine kinase activity; protein binding; ATP binding<br><br>Biological Process: DNA damage induced protein phosphorylation; chromatin-mediated maintenance of transcription; regulation of mitotic centrosome separation; DNA damage checkpoint; negative regulation of mitosis; peptidyl-threonine phosphorylation; G2/M transition DNA damage checkpoint; G2/M transition of mitotic cell cycle; DNA repair; DNA replication; response to DNA damage stimulus; regulation of cell proliferation |
| **Research Articles on CHEK1** | **1.** analysis of a pathway through which Chk1 inhibition can mediate HDACi-induced mitotic entry and cell death |
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