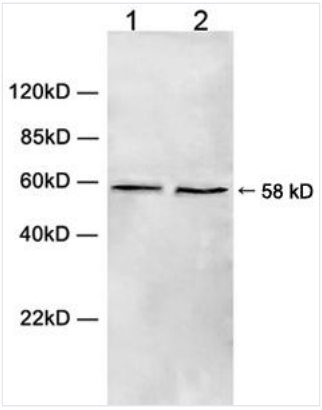
CHEK1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Chk1 (CHEK1), Polyclonal Antibody
Full Product Name	Chk1, (Ser280) (CHEK1, Cell Cycle Checkpoint Kinase)
Product Gene Name	anti-CHEK1 antibody
Product Synonym Names	Anti -Chk1, (Ser280) (CHEK1, Cell Cycle Checkpoint Kinase)
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a lyophilized powder in PBS, pH 7.4, 0.02% sodium azide.
Purity/Purification	Affinity Purified Purified by Protein A affinity chromatography.
Specificity	Recognizes endogenous levels of human Chk1 protein.
Preparation and Storage	Lyophilized powder may be stored at -20 degree C. Reconstitute with sterile 40-50% glycerol, aliquot and store at -20 degree C. Reconstituted product is stable for 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.
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	Synthetic non-phosphopeptide derived from the residues surrounding Ser 280 of human Chk1 (Swiss Prot: O14757).
Product Categories/Family for anti-CHEK1 antibody	Antibodies; Abs to Cancer Markers
Applications Tested/Suitable for anti-CHEK1 antibody	ELISA (EL/EIA), Western Blot (WB)
Application Notes for anti-CHEK1 antibody	Suitable for use in ELISA and Western Blot. Dilution: ELISA: 0.05-0.2ug/ml Western Blot: 0.5-2ug/ml
Related Product Information for anti-CHEK1 antibody	Chk1 is a serine/threonine kinase first identified as a checkpoint kinase in Schizosaccharomyces pombe. Chk1 is an evolutionarily conserved protein kinase that functions to ensure genomic integrity upon genotoxic stress. Chk1 is activated through phosphorylation by ATR/ATM and plays an important role in DNA damage checkpoint control, embryonic development, and tumor suppression. The activation of Chk1 in response to DNA replication blockages and certain forms of genotoxic stress involves phosphorylation of Ser317 and Ser345 degree Chk1 is also phosphorylated at Ser280 and Ser296 following DNA damage. Activated Chk1 further activates downstream factors that mediate cell cycle arrest and other cell physiological events through phosphorylation. These key cell cycle factors include p53 degree Cdc25C and more.

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.
Searchable Terms for CHEK1 purchase	MBS622709 is an antibody targeting CHEK1. Also known as Chk1, (Ser280) (CHEK1, Cell Cycle Checkpoint Kinase). Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-CHEK1 antibody
Western blot analysis of cell lysate using 1 ug/ml Rabbit Anti-Chk1 (Ser280) Polyclonal Antibody Lane 1: Hela cell lysate Lane 2: HEK293 cell lysate The signal was developed with IRDyeTM 800 Conjugated Goat Anti-Rabbit IgG

ADDITIONAL DETAILS

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

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]

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. Protein type: EC 2.7.11.1; Kinase, protein; Tumor suppressor; Protein kinase, CAMK; Protein kinase, Ser/Thr (non-receptor); CAMK group; CAMKL family; CHK1 subfamily Chromosomal Location of Human Ortholog: 11q24.2 Cellular Component: nucleoplasm; extracellular space; centrosome; chromosome, telomeric region; condensed nuclear chromosome; intracellular membrane-bound organelle; replication fork; cytosol; nucleus; chromatin Molecular Function: protein serine/threonine kinase activity; protein binding; ATP binding 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 of mitotic cell cycle; DNA repair; G2/M transition DNA damage checkpoint; 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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