Phospho-Chk2 (Thr26+ser28) Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	Chk2, Blocking Peptide
Full Product Name	Phospho-Chk2 (Thr26+Ser28) Blocking Peptide
Product Gene Name	Chk2 blocking peptide
Product Synonym Gene Name	CHEK2
Product Synonym Names	CDS 1; Cds1; Cds1 homolog; Checkpoint kinase 2; Checkpoint like protein CHK2; CHEK 2; Chek2; Chk 2; CHK2 checkpoint homolog (S. pombe); CHK2 checkpoint homolog; CHK2_HUMAN; hCds1; HuCds 1; LFS 2; LFS2; PP1425; RAD 53; RAD53; Rad53 homolog; Serine/threonine protein kinase Chk2; Serine/threonine-protein kinase Chk2
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	Chk2 (Thr26+Ser28) peptide (MBS9618995) is used for blocking the activity of Chk2 (Thr26+Ser28) antibody (MBS9614033)
Molecular Weight	60,915 Da
Chromosome Location	Chromosome: 22; NC_000022.10 (29083731..29137822, complement). Location: 22q12.1
OMIM	114480
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for Chk2 blocking peptide	Blocking/Control
Related Product Information for Chk2 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of Chk2 blocking peptide 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 Chk2 purchase	MBS9618995 is a blocking peptide targeting Chk2. Also known as Phospho-Chk2 (Thr26+Ser28) Blocking Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Chk2. It may not necessarily be applicable to this product.

NCBI GI #	54112407

NCBI GeneID	11200
NCBI Accession #	NP_001005735.1
UniProt Primary Accession #	O96017
UniProt Secondary Accession #	Q6QA03; Q6QA04; Q6QA05; Q6QA06; Q6QA07; Q6QA08; Q6QA10; A8K3Y9; B7ZBF3; B7ZBF4; B7ZBF5
UniProt Related Accession #	O96017
GenBank Nucleotide #	NM_001005735.1
NCBI Official Full Name	serine/threonine-protein kinase Chk2 isoform c
NCBI Official Synonym Full Names	checkpoint kinase 2
NCBI Official Symbol	CHEK2
NCBI Official Synonym Symbols	CDS1; CHK2; LFS2; RAD53; hCds1; HuCds1; PP1425
UniProt Protein Name	Serine/threonine-protein kinase Chk2
UniProt Synonym Protein Names	CHK2 checkpoint homolog; Cds1 homolog; Hucds1; hCds1; Checkpoint kinase 2
Protein Family	Serine/threonine-protein kinase
UniProt Gene Name	CHEK2
UniProt Synonym Gene Names	CDS1; CHK2; RAD53; Hucds1; hCds1
UniProt Entry Name	CHK2_HUMAN
NCBI Protein Information	serine/threonine-protein kinase Chk2; cds1 homolog; CHK2 checkpoint homolog; checkpoint-like protein CHK2
NCBI Summary for Chk2	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. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2012]

UniProt Comments for Chk2	Chk2: a CAMK protein kinase of the Rad53 family. 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. Phosphorylates and inhibits CDC25C, preventing entry into mitosis, p53, leading to cell cycle arrest in G1, and BRCA1, restoring survival after DNA damage. Twelve splice variant isoforms have been described for human Chk2. LOF mutants cause Li-Fraumeni syndrome, a highly penetrant familial cancer phenotype also caused by p53 mutations. Familial mutations also associated with prostate and breast cancer, and mutations also seen in a variety of sporadic cancers and cell lines. Protein type: Protein kinase, CAMK; Tumor suppressor; EC 2.7.11.1; Protein kinase, Ser/Thr (non-receptor); Kinase, protein; CAMK group; RAD53 family Chromosomal Location of Human Ortholog: 22q12.1 Cellular Component: nucleoplasm; Golgi apparatus; chromosome, telomeric region; PML body Molecular Function: identical protein binding; protein serine/threonine kinase activity; protein binding; protein homodimerization activity; metal ion binding; ubiquitin protein ligase binding; protein kinase binding; ATP binding Biological Process: DNA damage induced protein phosphorylation; protein stabilization; transcription, DNA-dependent; protein amino acid autophosphorylation; positive regulation of transcription, DNA-dependent; DNA damage response, signal transduction; protein amino acid phosphorylation; DNA damage response, signal transduction resulting in induction of apoptosis; regulation of transcription, DNA-dependent; cell division; cellular protein catabolic process; double-strand break repair; DNA damage checkpoint; response to gamma radiation; regulation of protein catabolic process; G2/M transition of mitotic cell cycle; response to DNA damage stimulus Disease: Li-fraumeni Syndrome 2; Prostate Cancer; Breast Cancer; Osteogenic Sarcoma
Research Articles on Chk2	**1.** The 1100delC mutation was encountered in the germline of one (1.7%) individual in this high risk cohort which indicates that the CHEK2 1100delC is not commonly encountered in Brazilian families with multiple diagnoses of breast and colorectal cancer.
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