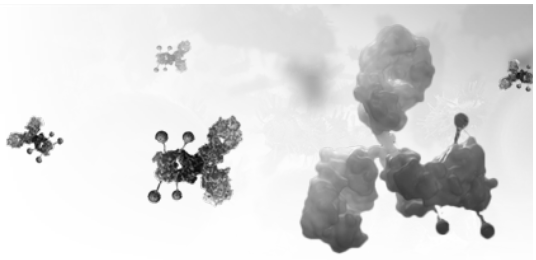

Human CHEK2 (phospho T68) peptide (DAG-P1446)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Antigen Description	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]
Specificity	High expression is found in testis, spleen, colon and peripheral blood leukocytes. Low expression is found in other tissues.
Purity	70 - 90% by HPLC.
Conjugate	Unconjugated
Sequence Similarities	Belongs to the protein kinase superfamily. CAMK Ser/Thr protein kinase family. CHK2 subfamily.Contains 1 FHA domain.Contains 1 protein kinase domain.
Format	Liquid
Preservative	None
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw

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cycles. Information available upon request.

GENE INFORMATION

Gene Name	CHEK2 checkpoint kinase 2 [Homo sapiens (human)]
Official Symbol	CHEK2
Synonyms	CHEK2; checkpoint kinase 2; CDS1; CHK2; LFS2; RAD53; hCds1; HuCds1; PP1425; serine/threonine-protein kinase Chk2; cds1 homolog; CHK2 checkpoint homolog; checkpoint-like protein CHK2;
Entrez Gene ID	11200
mRNA Refseq	NM_001005735.1
Protein Refseq	NP_001005735.1
UniProt ID	O96017
Chromosome Location	22q12.1
Pathway	Cell Cycle, organism-specific biosystem; Cell Cycle Checkpoints, organism-specific biosystem; Cell cycle, organism-specific biosystem; Cell cycle, organism-specific biosystem; Cell cycle, conserved biosystem; DNA damage response, organism-specific biosystem; FOXM1 transcription factor network, organism-specific biosystem; G1/S DNA Damage Checkpoints, organism-specific biosystem; G2/M Checkpoints, organism-specific biosystem; G2/M DNA damage checkpoint, organism-specific biosystem; HTLV-I infecti
Function	ATP binding; identical protein binding; metal ion binding; protein binding; protein homodimerization activity; protein kinase binding; protein serine/threonine kinase activity; protein serine/threonine kinase activity; ubiquitin protein ligase binding;

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