Recombinant Human CHEK2

Cat. No. CHEK2-26713TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length human Chk2 contains an N-terminal tag and was expressed by baculovirus in Sf9 insect cells.
Species	Human
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. Three transcript variants encoding different isoforms have been found for this gene.
Tissue specificity	High expression is found in testis, spleen, colon and peripheral blood leukocytes. Low expression is found in other tissues.

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Liquid
Purity	>90% by SDS-PAGE
Storage buffer	Preservative: NoneConstituents: 25% Glycerol, 50mM Tris HCl, 150mM Sodium chloride, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, pH 7.5
Storage	Aliquot and store at -80°C. Avoid repeated freeze / thaw cycles.
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.
Full Length	Full L.

GENE INFORMATION

Gene Name	CHEK2 checkpoint kinase 2 [Homo sapiens]
Official Symbol	CHEK2
Synonyms	CHEK2; checkpoint kinase 2; CHK2 (checkpoint, S.pombe) homolog , RAD53; serine/threonine-protein kinase Chk2; bA444G7; CDS1; CHK2; HuCds1; PP1425;
Gene ID	11200
mRNA Refseq	NM_001005735
Protein Refseq	NP_001005735
Uniprot ID	O96017

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Chromosome Location	22q12.1
Pathway	Cell Cycle Checkpoints, organism-specific biosystem; Cell cycle, organism-specific biosystem; Cell cycle, organism-specific biosystem; Cell cycle, conserved biosystem; FOXM1 transcription factor network, organism-specific biosystem;
Function	ATP binding; metal ion binding; nucleotide binding; protein binding; protein homodimerization activity;

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