

Recombinant Human CHEK2 Protein, GST-tagged

Cat. No. CHEK2-335H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human CHEK2 (NP_009125.1) (Met1-Leu543) was expressed with a GST tag at the N-terminus.

Species Human

Source Insect Cells

ProteinLength Met1-Leu543

Description

In response to DNA damage and replication bl centigradeeks, cell cycle progression is halted through the control of critical cell cycle regulators. The protein encoded by CHEK2 gene is a cell cycle checkpoint regulator and putative tumor suppressor. It contains a forkhead-ass centigradeiated protein interaction domain essential for activation in response to DNA damage and is rapidly phosphorylated in response to replication bl centigradeeks and DNA damage. When activated, the encoded CHEK2 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 ass centigradeiated with inherited mutations in TP53. Also, mutations in CHEK2s 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

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isoforms have been found for this gene.

Predicted N Terminal Met

Form Lyophilized from sterile 50 mM Tris, 150 mM NaCl, 25 %glycerol, pH 7.5, 0.1 mM EDTA, 0.5 mM TCEP. Normally 5 %- 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Molecular Mass The recombinant human CHEK2 consists of 777 amino acids and predicts a molecular mass of 88.1 kDa

Endotoxin < 1.0 EU per µg protein as determined by the LAL method.

Purity > 95 % as determined by SDS-PAGE.

Storage Samples are stable for up to twelve months from date of receipt at -70 centigrade. Store it under sterile conditions at -20 centigrade to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

Reconstitution It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name CHEK2 checkpoint kinase 2 [Homo sapiens]

Official Symbol CHEK2

Synonyms CHEK2; checkpoint kinase 2; CHK2 (checkpoint, S.pombe) homolog , CHK2 checkpoint homolog (S. pombe) , RAD53; serine/threonine-protein kinase Chk2; bA444G7; CDS1; CHK2; HuCds1; PP1425; cds1 homolog; CHK2 checkpoint

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homolog; checkpoint-like protein CHK2; LFS2; RAD53; hCds1;

Gene ID 11200

mRNA Refseq NM_001005735

Protein Refseq NP_001005735

UniProt ID O96017

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