

Recombinant Active Human CHEK2 Protein, His-tagged

Cat. No. CHEK2-09H Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant full-length human CHK2 was expressed by baculovirus in Sf9 insect cells using a N-terminal His tag.

Species

Human

Source

Insect Cells

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.

Molecular Mass

Approx ~70 kDa

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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Purity	> 90%
Stability	One year at -70 centigrade from data of shipment.
Storage	Store product at -70 centigrade. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Concentration	0.1 µg/µL
Storage Buffer	Recombinant protein stored in 50 mM sodium phosphate, pH 7.0, 300 mM NaCl, 150 mM imidazole, 0.25 mM DTT, 25% glycerol.
Shipping	Dry ice

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; CHK2 checkpoint homolog; cds1 homolog; checkpoint-like protein CHK2; EC 2.7.11.1
Gene ID	11200
mRNA Refseq	NM_007194
Protein Refseq	NP_009125

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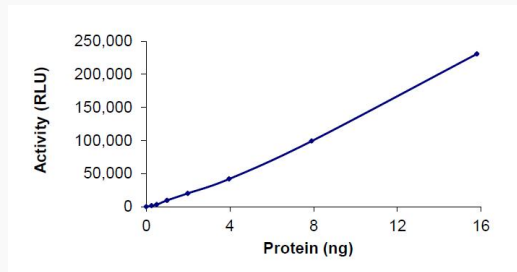
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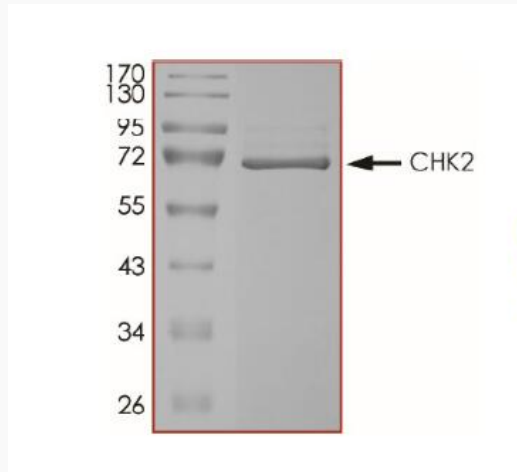
UniProt ID O96017

Specific Activity



The specific activity of CHK2 was determined to be 47 nmol/min/mg as per activity assay protocol.

Purity



The purity of CHK2 was determined to be > 90 % by densitometry.

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