# Recombinant Human CHEK2 Protein, GST-tagged, Alexa Fluor 488 conjugated

**Cat. No.** CHEK2-335HAF488 **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Alexa Fluor 488 conjugated 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 777 |
| **Description** | In response to DNA damage and replication bl centigradeks, 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 centigradeks 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 |

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| | serine/threonine protein kinases. Several transcript variants encoding different isoforms have been found for this gene. |
| **Form** | Lyophilized |
| **Molecular Mass** | 88.1 kDa |
| **N-terminal Sequence Analysis** | Met |
| **Endotoxin** | < 1.0 EU/ μg protein as determined by the LAL method. |
| **Purity** | > 95 % as determined by SDS-PAGE |
| **Characteristic** | Disulfide-linked homodimer<br>Labeled with Alexa Fluor 488 via amines<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm |
| **Storage** | Samples are stable for up to twelve months from date of receipt at -70 centigrade. Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **Storage Buffer** | 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. |
| **Reconstitution** | It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 μg/μL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents. |

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| **Conjugation** | Alexa Fluor 488 |

## GENE INFORMATION

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| **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 homolog; checkpoint-like protein CHK2; LFS2; RAD53; hCds1; |
| **Gene ID** | 11200 |
| **mRNA Refseq** | NM_001005735 |
| **Protein Refseq** | NP_001005735 |

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