Recombinant Human CHK2/CHEK2 Protein (GST Tag)

Catalog Number: PKSH030433

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human CHK2/CHEK2 protein Met 1-Leu543, with an N-terminal GST
Calculated MW	88.1 kDa
Accession	NP_009125.1
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Concentration	Subject to label value.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/ gel packs. Upon receipt, store it immediately at < - 20°C.
Formulation	Supplied as sterile 50 mM Tris, 150 mM NaCl, 25%glycerol, pH 7.5, 0.1 mM EDTA, 0.5 mM TCEP.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

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 CHEK2 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 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 associated with inherited mutations in TP53. Also, mutations in CHEK2 s 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.

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