

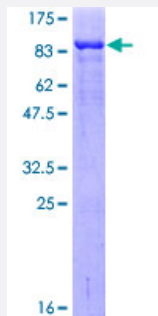
Full-Length

CHEK2 (Human) Recombinant Protein (P01)

Catalog # H00011200-P01

Size 25 ug, 10 ug

Applications



Specification

Product Description

Human CHEK2 full-length ORF (AAH04207.1, 1 a.a. - 543 a.a.) recombinant protein with GST-tag at N-terminal.

Sequence

MSRES DVEAQQSHGSSACSQPHGSVTQSQGSSSSQSQGISSSSTSTMPNSSQSSHSSSGTLSSL
ETVSTQELYSIPEDQEPEDQEPEEPTAPWARLWALQDGFANLECVNDNYWFGDRKSCEYCFD
EPLLKRTDKYRTYSKKHFRIFREVGPKNSYAYIEDHSGNGTFVNTELVGKGKRRPLNNNSEIALSLS
RNKVFVFFDLTVDDQSVYPKALRDEYIMSKTLGSGACGEVKLA FERKTCKKVAIKIISKRKFAIGSA
READPALNVETEIEILKKLNHPCKIKNFFDAEDYYVLELMEGGELFDKVVGNKRLKEATCKLYFYQ
MLLAVQYLHENGIIHRDLKPENVLLSSQEEDCLIKITDFGHSKILGETSLMRTLCTPTYLAEVLVS
VG TAGYNRAVDCWSLGVILFICLSGYPPFSEHRTQVSLKDQITSGKYNFIPEVWAEVSEKALDLVK
KLLVVDPKARFTTEEALRHPWLQDEDMKRKFQDLLSEENESTALPQVLAQPSTSRKRPREGEA
EGAETTKRPAVCAAVL

Host

Wheat Germ (in vitro)

Theoretical MW (kDa)

85.14

Interspecies Antigen Sequence

Mouse (83); Rat (83)

Preparation Method

[in vitro wheat germ expression system](#)

Purification

Glutathione Sepharose 4 Fast Flow

Quality Control Testing	12.5% SDS-PAGE Stained with Coomassie Blue.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Best use within three months from the date of receipt of this protein.

Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

Gene Info — CHEK2

Entrez GeneID	11200
GeneBank Accession#	BC004207
Protein Accession#	AAH04207.1
Gene Name	CHEK2
Gene Alias	CDS1, CHK2, HuCds1, LFS2, PP1425, RAD53
Gene Description	CHK2 checkpoint homolog (S. pombe)
Omim ID	114480 176807 259500 604373 609265
Gene Ontology	Hyperlink

Gene Summary

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. [provided by RefSeq]

Other Designations

OTTHUMP00000028871|checkpoint-like protein CHK2|protein kinase CHK2|serine/threonine-protein kinase CHK2

Publication Reference

- [Improvement of protein immobilization for the elaboration of tumor-associated antigen microarrays: application to the sensitive and specific detection of tumor markers from breast cancer sera.](#)

Yang Z, Chevolot Y, Géhin T, Solassol J, Mange A, Souteyrand E, Laurenceau E.

Biosensors & Bioelectronics 2013 Feb; 40(1):385.

Application: Array, Recombinant protein

- [NormaCurve: a SuperCurve-based method that simultaneously quantifies and normalizes reverse phase protein array data.](#)

Troncale S, Barbet A, Coulibaly L, Henry E, He B, Barillot E, Dubois T, Hupé P, de Koning L.

PLoS One 2012 Jun; 7(6):e38686.

Application: Func, Human, Mouse, MCF10A, NIH-3T3 cells

Pathway

- [Cell cycle](#)
- [p53 signaling pathway](#)

Disease

- [Adenocarcinoma](#)

- [Adenoma](#)
- [Ataxia telangiectasia](#)
- [Atherosclerosis](#)
- [Barrett Esophagus](#)
- [Brain Neoplasms](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Cell Transformation](#)
- [Colon cancer](#)
- [Colonic Neoplasms](#)
- [Colorectal Neoplasms](#)
- [DNA Damage](#)
- [Endometrial Neoplasms](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Glioma](#)
- [Head and Neck Neoplasms](#)
- [Hypertension](#)
- [Kidney Diseases](#)
- [Kidney Failure](#)
- [Kidney Neoplasms](#)
- [Laryngeal Neoplasms](#)
- [Leukemia](#)
- [Lung Neoplasms](#)
- [Malignant melanoma](#)

- [Melanoma](#)
- [Meningeal Neoplasms](#)
- [Meningioma](#)
- [Mouth Neoplasms](#)
- [Neoplasm Invasiveness](#)
- [Neoplasm Metastasis](#)
- [Neoplasm Recurrence](#)
- [Neoplasms](#)
- [Neoplastic Syndromes](#)
- [Neuroma](#)
- [Ovarian cancer](#)
- [Ovarian Neoplasms](#)
- [Pancreatic cancer](#)
- [Pancreatic Neoplasms](#)
- [Pharyngeal Neoplasms](#)
- [Prostate cancer](#)
- [Prostatic Neoplasms](#)
- [Pulmonary Disease](#)
- [Skin Neoplasms](#)
- [Urinary Bladder Neoplasms](#)
- [Werner syndrome](#)