



Recombinant Human Serine/threonine-protein kinase Chk2 (CHEK2)

Product Code	CSB-MP005339HU
Storage	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
Uniprot No.	O96017
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	>85% (SDS-PAGE)
Sequence	MSRES DVEAQ QSHGSSACSQ PHGSVTQSQG SSSQSQGISS SSTSTMPNSS QSSHSSSGTL SSLETVSTQE LYSIPEDQEP EDQEPEEPTP APWARLWALQ DGFANLECVN DNYWFGDRDKS CEYCFDEPLL KRTDKYRTYS KKHFRIFREV GPKNSYIAYI EDHSGNGTFV NTELVGKGKR RPLNNNSEIA LSLSRNKV FV FDLTVDDQS VYPKALRDEY IMSKTLGSGA CGEVKLA FER KTCKKVAIKI ISKRKFAIGS AREADPALNV ETEIEILKKL NHPCIIKIKN FFDAEDYYIV LELMEGGELF DKVVGKRLK EATCKLYFYQ MLLAVQYLHE NGIIHRDLKP ENVLLSSQEE DCLIKITDFG HSKILGETSL MRTL CGTPTY LAPEVLVSVG TAGYNRAVDC WSLGVILFIC LSGYPPFSEH RTQVSLKDQI TSGKYNFIPE VWA EVSEKAL DLVKKLLVVD PKARFTTEEA LRHPWLQDED MKRKFQDLLS EENESTALPQ VLAQPSTSRK RPREGEAEGA ETTKRPAVCA AVL
Source	Mammalian cell
Target Names	CHEK2
Protein Names	Recommended name: Serine/threonine-protein kinase Chk2 EC= 2.7.11.1 Alternative name(s): CHK2 checkpoint homolog Cds1 homolog Short name= Hucds1 Short name= hCds1 Checkpoint kinase 2
Expression Region	1-543
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag type will be determined during the manufacturing process.
Protein Length	Full length protein
Target Details	In response to DNA damage and replication blocks, cell cycle progression is halted through the control of critical cell cycle regulators. This protein 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.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.