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# Product datasheet for PH301278

## Chk2 (CHEK2) (NM_007194) Human Mass Spec Standard

### Product data:

| | |
|---|---|
| **Product Type:** | Mass Spec Standards |
| **Description:** | CHEK2 MS Standard C13 and N15-labeled recombinant protein (NP_009125) |
| **Species:** | Human |
| **Expression Host:** | HEK293 |
| **Expression cDNA Clone or AA Sequence:** | RC201278 |
| **Predicted MW:** | 60.9 kDa |
| **Protein Sequence:** | >RC201278 protein sequence<br>Red=Cloning site Green=Tags(s)<br><br>MSRESDVEAQQSHGSSACSQPHGSVTQSQGSSSQSQGISSSSTSTMPNSSQSSHSSSGTLSSLETVSTQE<br>LYSIPEDQEPEDQEPEEPTPAPWARLWALQDGFANLECVNDNYWFGRDKSCEYCFDEPLLKRTDKYRTYS<br>KKHFRIFREVGPKNSYIAYIEDHSGNGTFVNTELVGKGKRRPLNNNSEIALSLSRNKVFVFFDLTVDDQS<br>VYPKALRDEYIMSKTLGSGACGEVKLAFERKTCKKVAIKIISKRKFAIGSAREADPALNVETEIEILKKL<br>NHPCIIKIKNFFDAEDYYIVLELMEGGELFDKVVGNKRLKEATCKLYFYQMLLAVQYLHENGIIHRDLKP<br>ENVLLSSQEEDCLIKITDFGHSKILGETSLMRTLCGTPTYLAPEVLVSVGTAGYNRAVDCWSLGVILFIC<br>LSGYPPFSEHRTQVSLKDQITSGKYNFIPEVWAEVSEKALDLVKKLLVVDPKARFTTEEALRHPWLQDED<br>MKRKFQDLLSEENESTALPQVLAQPSTSRKRPREGEAEGAETTKRPAVCAAVL<br><br>TRTRPLEQKLISEEDLAANDILDYKDDDDKV |
| **Tag:** | C-Myc/DDK |
| **Purity:** | > 80% as determined by SDS-PAGE and Coomassie blue staining |
| **Concentration:** | >0.05 µg/µL as determined by microplate BCA method |
| **Labeling Method:** | Labeled with [U- 13C6, 15N4]-L-Arginine and [U- 13C6, 15N2]-L-Lysine |
| **Buffer:** | 25 mM Tris-HCl, 100 mM glycine, pH 7.3 |
| **Storage:** | Store at -80°C. Avoid repeated freeze-thaw cycles. |
| **Stability:** | Stable for 3 months from receipt of products under proper storage and handling conditions. |
| **RefSeq:** | NP_009125 |
| **RefSeq Size:** | 1862 |
| **RefSeq ORF:** | 1629 |

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**Synonyms:** CDS1; CHK2; hCds1; HuCds1; LFS2; PP1425; RAD53

**Locus ID:** 11200

**UniProt ID:** O96017

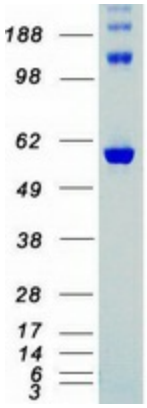
**Cytogenetics:** 22q12.1

**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. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2012]

**Protein Families:** Druggable Genome, Protein Kinase, Stem cell - Pluripotency

**Protein Pathways:** Cell cycle, p53 signaling pathway

## Product images:




Coomassie blue staining of purified CHEK2 protein (Cat# [TP301278]). The protein was produced from HEK293T cells transfected with CHEK2 cDNA clone (Cat# [RC201278]) using MegaTran 2.0 (Cat# [TT210002]).

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