

## Product datasheet for **SC332541**

### Chk2 (CHEK2) (NM\_001257387) Human Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Chk2 (CHEK2) (NM\_001257387) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Chk2  
**Synonyms:** CDS1; CHK2; hCds1; HuCds1; LFS2; PP1425; RAD53  
**Vector:** pCMV6-Entry (PS100001)  
**Fully Sequenced ORF:** >SC332541 representing NM\_001257387.  
Blue=Insert sequence Red=Cloning site Green=Tag(s)

```
ATGTCAAAACTCTTGAAGTGGTGCCTGTGGAGAGGTAAGCTGGCTTTCGAGAGGAAAACATGTAAG
AAAGTAGCCATAAAGATCATCAGCAAAAGGAAGTTTGCTATTGGTTCAGCAAGAGAGGCAGACCCAGCT
CTCAATGTTGAAACAGAAATAGAAATTTGAAAAAGCTAAATCATCCTTGCATCATCAAGATTA AAAAC
TTTTTTGATGCAGAAGATTATTATTGTTTTGGAATTGATGGAAGGGGGAGAGCTGTTTGACAAAGTG
GTGGGGAATAAACGCCTGAAAGAAGCTACCTGCAAGCTCTATTTTACCAGATGCTCTTGGCTGTGCAG
TACCTTCATGAAAACGGTATTATACACCGTGACTTAAAGCCAGAGAATGTTTTACTGTCATCTCAAGAA
GAGGACTGCTTATAAAGATTACTGATTTTGGGCACTCCAAGATTTTGGGAGAGACTCTCTCATGAGA
ACCTTATGTGGAACCCACCTACTTGGCGCCTGAAGTCTTGTTTCTGTTGGGACTGCTGGGTATAAC
CGTGCTGTGGACTGCTGGAGTTTAGGAGTTATTCTTTTTATCTGCCTTAGTGGGTATCCACCTTTCTCT
GAGCATAGGACTCAAGTGTCACTGAAGGATCAGATCACCAGTGGAAAATACAACCTCATTCTGAAGTC
TGGGCAGAAGTCTCAGAGAAAGCTCTGGACCTGTCAAGAAGTTGTTGGTAGTGGATCCAAGGCACGT
TTTACGACAGAAGAAGCCTTAAGACACCCGTGGCTTCAGGATGAAGACATGAAGAGAAAGTTTCAAGAT
CTTCTGTCTGAGGAAAATGAATCCACAGCTCTACCCAGGTTCTAGCCCAGCCTTCTACTAGTCGAAAG
CGGCCCGTGAAGGGGAAGCCGAGGGTGCCGAGACCACAAAGCGCCAGCTGTGTGTGCTGTGTGTTG
TGA
```

**Restriction Sites:** Sgfl-Mlul  
**ACCN:** NM\_001257387  
**Insert Size:** 969 bp  
**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).  
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).



[View online »](#)

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_001257387.1](#)

**RefSeq Size:** 1976 bp

**RefSeq ORF:** 969 bp

**Locus ID:** 11200

**UniProt ID:** [O96017](#)

**Cytogenetics:** 22q12.1

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

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

**MW:** 36.2 kDa

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

Transcript Variant: This variant (4) contains an alternate exon compared to variant 1, that causes a frameshift. The resulting isoform (d) is shorter at the N-terminus compared to isoform a.