

## Product datasheet for **RC225807**

### **Chk1 (CHEK1) (NM\_001114122) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Chk1 (CHEK1) (NM_001114122) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Chk1
Synonyms:	CHK1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC225807 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCAGTGCCCTTTGTGGAAGACTGGGACTTGGTGCAAACCCTGGGAGAAGGTGCCTATGGAGAAGTTC  
 AACTTGCTGTGAATAGAGTAAGTGAAGAAGCAGTCGCAGTGAAGATTGTAGATATGAAGCGTGCCGTAGA  
 CTGTCCAGAAAATATTAAGAAAGAGATCTGTATCAATAAAATGCTAAATCATGAAAATGTAGTAAAATTC  
 TATGGTCACAGGAGAGAAGGCAATATCCAATATTTATTTCTGGAGTACTGTAGTGGAGGAGAGCTTTTTG  
 ACAGAATAGAGCCAGACATAGGCATGCCTGAACCAGATGCTCAGAGATTCTCCATCAACTCATGGCAGG  
 GGTGGTTTATCTGCATGGTATTGGAATAACTCACAGGGATATTAACCAGAAAATCTTCTGTTGGATGAA  
 AGGGATAACCTCAAATCTCAGACTTTGGCTTGGCAACAGTATTCGGTATAATAATCGTGAGCGTTTGT  
 TGAACAAGATGTGTGGTACTTTACCATATGTTGCTCCAGAACTTCTGAAGAGAAGAGAATTCATGCAGA  
 ACCAGTTGATGTTTGGTCTGTGGAATAGTACTTACTGCAATGCTCGCTGGAGAATTGCCATGGGACCAA  
 CCCAGTGACAGCTGTGAGGATATTCTGACTGGAAAGAAAAAAAACATACCTCAACCCCTTGAAAAAAA  
 TCGATTCTGCTCCTCTAGCTCTGCTGCATAAAATCTTAGTTGAGAATCCATCAGCAAGAATTACCATTCC  
 AGACATCAAAAAGATAGATGGTACAACAAACCCCTCAAGAAAGGGGCAAAAAGGCCCGGAGTCACTTCA  
 GGTGGTGTGCAGAGTCTCCAGTGGATTTTCTAAGCACATTCAATCCAATTTGGACTTCTCTCCAGTAA  
 ACAGTGCCTTAGTGAAGAAAATGTGAAGTACTCCAGTTCTCAGCCAGAACCCCGCACAGGTCTTTCCTT  
 ATGGGATACCAGCCCCTCATACATTGATAAATGGTACAAGGGATCAGCTTTTCCAGCCCACATGTCCT  
 GATCATATGCTTTTGAATAGTCAGTTACTTGGCACCCAGGATCCTCACAGAACCCTGGCAGCGGTTGG  
 TCAAAAAGAAATGACACGATTCTTTACCAAATGGATGCAGACAAATCTTATCAATGCCTGAAAGAGACTG  
 TGAGAAGTTGGGCTATCAATGGAAGAAAAGTTGTATGAATCAGGTTACTATATCAACAACCTGATAGGAGA  
 AACAATAAACTCATTTTCAAAGTGAATTTGTTAGAAAATGGATGATAAAATATTGGTTGACTTCCGCCTT  
 CTAAGGGTATGGATTGGAGTTCAAGAGACACTTCTGAAGATTAAGGGGAAGCTGATTGATATTGTGAG  
 CAGCCAGAAGGTTTGGCTTCTGCCACA

**ACGGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA**

**Protein Sequence:**

>RC225807 protein sequence  
 Red=Cloning site Green=Tags(s)

MAVPFVEDWDLVQTLGEGAYGEVQLAVNRVTEEAVAVKIVDMKRAVDCPENIKKEICINKMLNHENVVKF  
 YGHRREGNIQYLFLEYCSGGELFDRIEPDIGMPEPDAQRFHQLMAGVVYLHGIGITHRDIKPENLLLDE  
 RDNLKISDFGLATVFRYNNRERLLNKMCGTLPYVAPELLKRREFHAEPVDVWSCGIVLTAMLGELPWDQ  
 PSDSCQEYSDWKEKTYLNPWKKIDSAPLALLHKILVENPSARITIPDIKKDRWYNKPLKKGAKRPRVTS  
 GGVSSESPSGFSKHIQSNLDFSPVNSASSEENVKYSSSQPEPRTGLSLWDTSPSYIDKLVQGISFSQPTCP  
 DHMLLNSQLLGTGSSQNPWQRLVKRMTRFFTKLDADKSYQCLKETCEKLGQWKKSCMNQVTISTDDR  
 NNKLIKFNLLMDDKILVDFRLSKGDGLEFKRHLKIKGKLIIDIVSSQKVWLPAT

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6199\\_e01.zip](https://cdn.origene.com/chromatograms/mk6199_e01.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

**ACCN:** NM\_001114122

**ORF Size:** 1428 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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).

**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\\_001114122.2](#), [NP\\_001107594.1](#)
**RefSeq Size:** 4174 bp

**RefSeq ORF:** 1431 bp

**Locus ID:** 1111

**UniProt ID:** [O14757](#)
**Cytogenetics:** 11q24.2

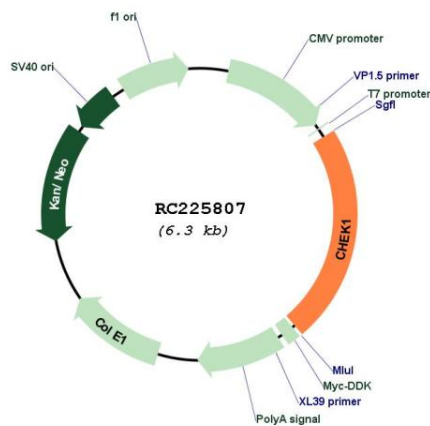
**Protein Families:** Druggable Genome, Protein Kinase, Stem cell - Pluripotency

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

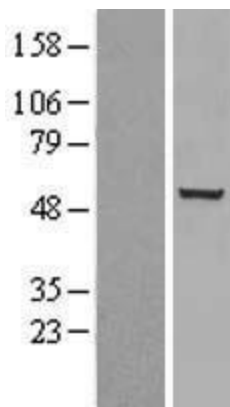
**MW:** 54.4 kDa

**Gene Summary:** The protein encoded by this gene belongs to the Ser/Thr protein kinase family. It is required for checkpoint mediated cell cycle arrest in response to DNA damage or the presence of unreplicated DNA. This protein acts to integrate signals from ATM and ATR, two cell cycle proteins involved in DNA damage responses, that also associate with chromatin in meiotic prophase I. Phosphorylation of CDC25A protein phosphatase by this protein is required for cells to delay cell cycle progression in response to double-strand DNA breaks. Several alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Oct 2011]

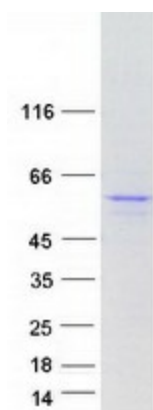
**Product images:**



Circular map for RC225807



Western blot validation of overexpression lysate (Cat# [LY426457]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC225810] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CHEK1 protein (Cat# [TP325807]). The protein was produced from HEK293T cells transfected with CHEK1 cDNA clone (Cat# RC225807) using MegaTran 2.0 (Cat# [TT210002]).