

## Product datasheet for **RC200494**

### CDK2 (NM\_001798) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CDK2 (NM_001798) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CDK2
Synonyms:	CDKN2; p33(CDK2)
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC200494 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGAGAACTTCCAAAAGGTGGAAAAGATCGGAGAGGGCACGTACGGAGTTGTGTACAAAGCCAGAAACA  
AGTTGACGGGAGAGGTGGTGGCGCTTAAGAAAATCCGCCTGGACTGAGACTGAGGGTGTGCCAGTAC  
TGCCATCCGAGAGATCTCTCTGCTTAAGGAGCTTAACCATCCTAATATTGTCAAGCTGCTGGATGTCATT  
CACACAGAAAATAAACTCTACCTGGTTTTTGAATTTCTGCACCAAGATCTCAAGAAATTCATGGATGCCT  
CTGCTCTCACTGGCATTCTCTTCCCCTCATCAAGAGCTATCTGTTCCAGCTGCTCCAGGGCCTAGCTTT  
CTGCCATTCTCATCGGGTCCCTCCACCGAGACCTTAAACCTCAGAACTCGCTTATTAACACAGAGGGGGCC  
ATCAAGCTAGCAGACTTTGGACTAGCCAGAGCTTTGGAGTCCCTGTTCTGTACTTACACCCATGAGGTGG  
TGACCTGTGGTACCGAGCTCCTGAAATCCTCCTGGGCTGCAAAATATTATCCACAGCTGTGGACATCTG  
GAGCCTGGGCTGCATCTTTGCTGAGATGGTGACTCGCCGGGCCATTCCTGGAGATTCTGAGATTGAC  
CAGCTCTCCGGATCTTTCGACTCTGGGACCCAGATGAGGTGGTGTGGCCAGGAGTTACTTCTATGC  
CTGATTACAAGCCAAGTTTCCCAAGTGGGCCCGCAAGATTTTAGTAAAGTTGTACCTCCCCTGGATGA  
AGATGGACGGAGCTTGTATCGCAAATGCTGCACTACGACCCTAACAAAGCGGATTCGGCCAAGGCAGCC  
CTGGCTCACCTTTCTTCCAGGATGTGACCAAGCCAGTACCCCATCTTCGACTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC200494 protein sequence  
 Red=Cloning site Green=Tags(s)

MENFQKVEKIGEGTYGVVYKARNKLTGEVVALKKIRLDTETEGVPSTAIRESLLKELNHPNIVKLLDVI  
 HTENKLYLVFEFLHQDLKKFMDASALTGIPLPLIKSYLFQLLQGLAFCHSHRVLHRDLKPQNLLINTEGA  
 IKLADFLARAFGVPVRYTYTHEVVTLLWYRAPEILLGCKYYSTAVDIWSLGCIFAEMVTRRALFPGDSEID  
 QLFRIIFRTLGTPEVVWPGVTSMPDYKPSFPKWARQDFSKVVPPLDEDDGRSLLSQMLHYDPNKRISAKAA  
 LAHPFFQDVTKPVPHLRL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

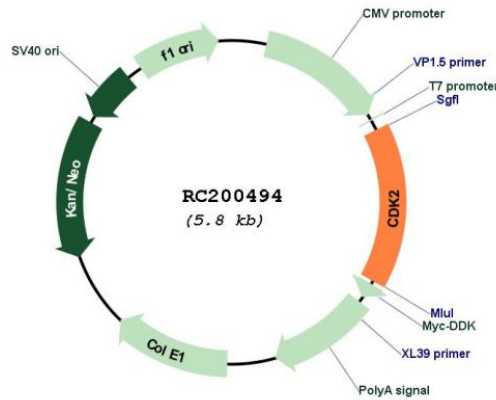
Chromatograms: [https://cdn.origene.com/chromatograms/mk6080\\_g03.zip](https://cdn.origene.com/chromatograms/mk6080_g03.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



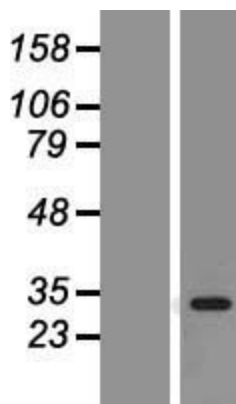
Plasmid Map:



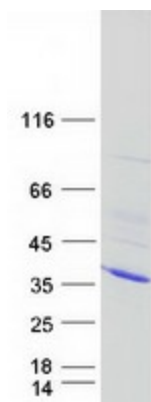
ACCN: NM\_001798

<b>ORF Size:</b>	894 bp
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>RefSeq:</b>	<a href="#">NM_001798.1</a> , <a href="#">NM_001798.2</a> , <a href="#">NM_001798.3</a> , <a href="#">NM_001798.4</a> , <a href="#">NM_001798.5</a> , <a href="#">NP_001789.2</a>
<b>RefSeq Size:</b>	2301 bp
<b>RefSeq ORF:</b>	897 bp
<b>Locus ID:</b>	1017
<b>Domains:</b>	pkinase, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Cell cycle, Oocyte meiosis, p53 signaling pathway, Pathways in cancer, Progesterone-mediated oocyte maturation, Prostate cancer, Small cell lung cancer
<b>MW:</b>	33.9 kDa
<b>Gene Summary:</b>	<p>This gene encodes a member of a family of serine/threonine protein kinases that participate in cell cycle regulation. The encoded protein is the catalytic subunit of the cyclin-dependent protein kinase complex, which regulates progression through the cell cycle. Activity of this protein is especially critical during the G1 to S phase transition. This protein associates with and regulated by other subunits of the complex including cyclin A or E, CDK inhibitor p21Cip1 (CDKN1A), and p27Kip1 (CDKN1B). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2014]</p>

## Product images:



Western blot validation of overexpression lysate (Cat# [LY419741]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200494 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CDK2 protein (Cat# [TP300494]). The protein was produced from HEK293T cells transfected with CDK2 cDNA clone (Cat# RC200494) using MegaTran 2.0 (Cat# [TT210002]).