

Product datasheet for **RC200495**

CDK1 (NM_001786) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDK1 (NM_001786) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CDK1
Synonyms:	CDC2; CDC28A; P34CDC2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200495 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAAGATTATACAAAATAGAGAAAATTGGAGAAGGTACCTATGGAGTTGTGTATAAGGGTAGACACA
AAACTACAGGTCAAGTGGTAGCCATGAAAAAATCAGACTAGAAAGTGAAGAGGAAGGGTTCTAGTAC
TGCAATTCGGGAAATTTCTCTATTAAAGGAACTTCGTCATCCAAATATAGTCAGTCTTCAGGATGTGCTT
ATGCAGGATCCAGGTTATATCTCATCTTTGAGTTTCTTCCATGGATCTGAAGAAATACTTGGATTCTA
TCCCTCCTGGTCAGTACATGGATTCTTCACTTGTAAAGAGTTATTTATACAAATCCTACAGGGGATTGT
GTTTTGCACTCTAGAAGAGTTCTTACAGAGACTTAAAACCTCAAATCTTTGATTGATGACAAAGGA
ACAATTAAGTGGCTGATTTTGGCCTTGCCAGAGCTTTTGAATACCTATCAGAGTATATACACATGAGG
TAGTAACACTCTGGTACAGATCTCCAGAAGTATTGCTGGGGTCAGCTCGTTACTCAACTCCAGTTGACAT
TTGGAGTATAGGCACCATATTTGCTGAACTAGCAACTAAGAAACCACTTTTCCATGGGGATTGAGAAAT
GATCAACTCTTCAGGATTTTCAGAGCTTTGGGCACTCCAATAATGAAGTGTGGCCAGAAGTGAATCTT
TACAGGACTATAAGAATACATTTCCAAATGGAACCAGGAAGCCTAGCATCCCATGTCAAAAACCTGGA
TGAAAATGGCTTGGATTTGCTCTCGAAAATGTTAATCTATGATCCAGCCAAACGAATTTCTGGCAAAATG
GCACTGAATCATCCATATTTAATGATTTGGACAATCAGATTAAGAAGATG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC200495 protein sequence
Red=Cloning site Green=Tags(s)

MEDYTKIEKIGEGTYGVVYKGRHKTTGQVVAMKKIRLESEEEGVPSTAIREISLLKELRHPNIVSLQDVL
 MQDSRLYLIFEFLSMDLKKYLDSSIPGGQYMDSSLVKSILYQILQGI VFCHSRRLHRDLKPQNLLIDDKG
 TIKLADFLARAFGIPIRVYTHEVVTLWYRSPEVLLGSARYSTPVDIWSIGTIFAELATKKPLFHGDSEI
 DQLFRIFRALGTPNNEVWPEVESLQDYKNTFPKWKPGSLASHVKNLDEGLDLLSKMLIYDPAKRISGKM
 ALNHPYFNLDLNQIKKM

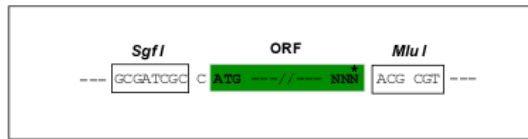
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6194_a11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001786

ORF Size: 891 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_001786.5](#)

RefSeq Size: 1923 bp

RefSeq ORF: 894 bp

Locus ID: 983

UniProt ID: [P06493](#)

Cytogenetics: 10q21.2

Domains: pkinase, TyrKc, S_TKc

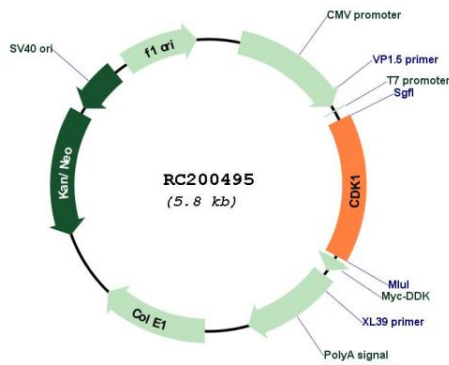
Protein Families: Druggable Genome, Protein Kinase, Stem cell - Pluripotency

Protein Pathways: Cell cycle, Gap junction, Oocyte meiosis, p53 signaling pathway, Progesterone-mediated oocyte maturation

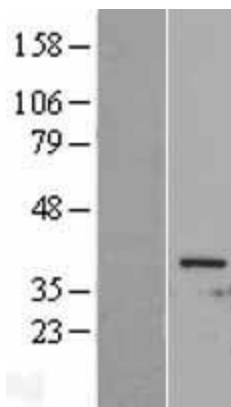
MW: 34.1 kDa

Gene Summary: The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein is a catalytic subunit of the highly conserved protein kinase complex known as M-phase promoting factor (MPF), which is essential for G1/S and G2/M phase transitions of eukaryotic cell cycle. Mitotic cyclins stably associate with this protein and function as regulatory subunits. The kinase activity of this protein is controlled by cyclin accumulation and destruction through the cell cycle. The phosphorylation and dephosphorylation of this protein also play important regulatory roles in cell cycle control. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2009]

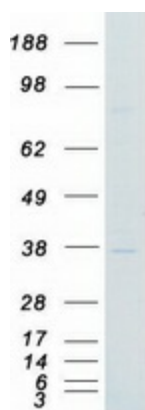
Product images:



Circular map for RC200495



Western blot validation of overexpression lysate (Cat# [LY400676]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200495 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CDK1 protein (Cat# [TP300495]). The protein was produced from HEK293T cells transfected with CDK1 cDNA clone (Cat# RC200495) using MegaTran 2.0 (Cat# [TT210002]).