

## Product datasheet for **RC206615**

### Cyclin A1 (CCNA1) (NM\_003914) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cyclin A1 (CCNA1) (NM_003914) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cyclin A1
Synonyms:	CT146
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC206615 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAGACCGGCTTTCCGCAATCATGTACCCTGGATCTTTTATTGGGGCTGGGGAGAAGAGTATCTCA  
 GCTGGGAAGGACCGGGCTCCCAGATTTCTGCTCCAGCAGCCCGTGGAGTCTGAAGCAATGCAGCTGCAG  
 CAACCCCAAGAGTGGAGTTGTGCTGGCTACAGTGGCCCGAGGTCCCGATGCTTGTGAGATACTACCAGA  
 GCCCCGCTGGCCAGGATCCCCGCAGAGGACAGTGTAGGGCTGCTAACTGCAAATGGGCAGTACAGGA  
 GGACCTGTGGCCAGGGATCACAAGAATCAGGTGTTATTCTGGATCAGAAAATGCCTTCCCTCCAGCTGG  
 AAAGAAAGCACTCCCTGACTGTGGGGTCCAAGAGCCCCCAAGCAAGGGTTTGACATCTACATGGATGAA  
 CTAGAGCAGGGGGACAGAGACAGCTGCTCGGTGAGAGAGGGGATGGCATTGAGGATGTGTATGAAGTAG  
 ACACCGGCACACTCAAGTCAGACCTGCCTTCTGCTGGATTTCAACACAGTTTCCCTATGCTGGTAGA  
 TTCATCTCTCTCTCCAGTCTGAAGATATATCCAGTCTTGGCACAGATGTGATAAATGTGACTGAATAT  
 GCTGAAGAAATTTATCAGTACCTTAGGGAAGCTGAAATAAGGCACAGACCCAAAGCACACTACATGAAGA  
 AGCAGCCAGACATCACGGAAGGCATGCGCACGATTCTGGTGGACTGGCTGGTGGAGGTTGGGGAAGAATA  
 TAAACTTCGAGCAGAGACCCTGTATCTGGCTGTCAACTTCTGGACAGGTTCTTTTCATGTATGTCTGTT  
 CTGAGAGGGAAATGCAGCTCGTAGGAACAGCAGCTATGCTTTTGGCTTCGAAATATGAAGAGATATATC  
 CTCCTGAAGTAGACGAGTTTGTCTATATCACCGATGATACATACAAAAACGACAACCTGTTAAAAATGGA  
 ACACTTGTCTTCTGAAAGTTCTAGCTTTTGTCTGACAGTACCAACCACCAACAGTTTCTCTTCAGTAC  
 TTGAGGCGACAAGGAGTGTGCGTCAGGACTGAGAACCTGGCTAAGTACGTAGCAGAGCTGAGTCTACTTG  
 AAGCAGATCCATTCTTGAATATCTTCTTCACTGATAGCTGCAGCAGCTTTTTCCTGGCAAATGATGCT  
 TGTGAACAAGCACTTTTGGCCAGAAACCCTTGTGCAATTTACAGGGTATTCATTAAGTAAATTTGTCCT  
 TGCTGAGTGAGCTTCATAAAGCGTACCTTGATATACCCCATCGACCTCAGCAAGCAATTAGGGAGAAGT  
 ACAAGGCTTCAAAGTACCTGTGTGTGCCCTCATGGAGCCACCTGCAGTCTTCTCTACAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC206615 protein sequence  
 Red=Cloning site Green=Tags(s)

METGFPAIMYPGSFIGGWGEEYLSWEGPGLPDFVFQQPVESEAMHCSNPKSGVVLATVARGPDACQILTR  
 APLGQDPPQRTVLGLLTANGQYRRTCGQGITRIRCYSGSENAFPPAGKKALPDCGVQEPKQGFDIYMDE  
 LEQGDSDSCSVREGMAFEDVYEVDTGTLKSDLHFLDFNTVSPMLVDSSLLSQSEDISSLGTDVINVTEY  
 AEEIYQYLREAEIRHRPKAHYMKKQPDITEGMRTILVDWLVEVGEEYKLAETLYLAVNFLDRFLSCMSV  
 LRGKQLQLVGTAAMLLASKYEEIYPPEVDEFVYITDDTYTKRQLLMEHLLKVLAFDLTVPTTNQFLLQY  
 LRRQGVCRVTENLAKYVAELSLLEADPFLKYLPSLIAAAAFCLANYTVNKHFWPETLAAFTGYSLSEIVP  
 CLSELHKAYLDIPHRPQQAIREKYKASKYLCVSLMEPPAVLLLQ

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6017\\_e06.zip](https://cdn.origene.com/chromatograms/mk6017_e06.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_003914

**ORF Size:** 1509 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\\_003914.4](#)
**RefSeq Size:** 1965 bp

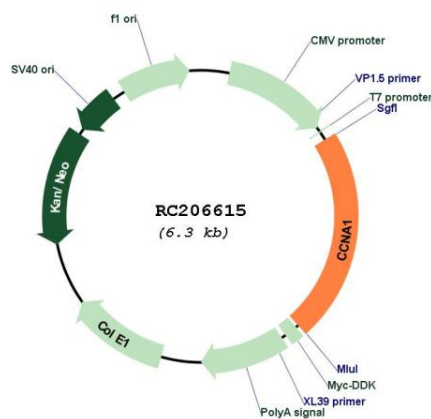
**RefSeq ORF:** 1398 bp

**Locus ID:** 8900

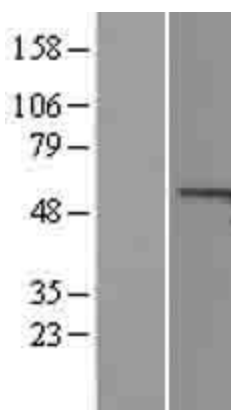
**UniProt ID:** [P78396](#)
**Cytogenetics:** 13q13.3

<b>Domains:</b>	cyclin_C, CYCLIN, cyclin
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Acute myeloid leukemia, Cell cycle, Pathways in cancer, Progesterone-mediated oocyte maturation
<b>MW:</b>	52.2 kDa
<b>Gene Summary:</b>	<p>The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. The cyclin encoded by this gene was shown to be expressed in testis and brain, as well as in several leukemic cell lines, and is thought to primarily function in the control of the germline meiotic cell cycle. This cyclin binds both CDK2 and CDC2 kinases, which give two distinct kinase activities, one appearing in S phase, the other in G2, and thus regulate separate functions in cell cycle. This cyclin was found to bind to important cell cycle regulators, such as Rb family proteins, transcription factor E2F-1, and the p21 family proteins. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]</p>

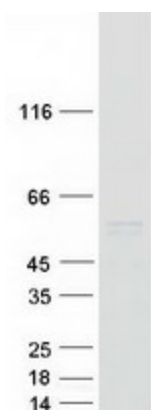
**Product images:**



Circular map for RC206615



Western blot validation of overexpression lysate (Cat# [LY401287]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206615 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CCNA1 protein (Cat# [TP306615]). The protein was produced from HEK293T cells transfected with CCNA1 cDNA clone (Cat# RC206615) using MegaTran 2.0 (Cat# [TT210002]).