

## Product datasheet for **RC204442**

### CDK2AP1 (NM\_004642) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** CDK2AP1 (NM\_004642) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** CDK2AP1  
**Synonyms:** doc-1; DOC1; DORC1; p12DOC-1; ST19  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC204442 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTTACAACCGAACTTGGCCGCGCACATGCCCGCCGCCCTCAACGCCGCTGGGAGTGTCCACT  
CGCCTTCCACCAGCATGGCAACGTCTTACAGTACCGCCAGCTGCTCAGTGACTACGGGCCACCGTCCCT  
AGGCTACACCCAGGGAAGTGGGAACAGCCAGGTGCCCAAAGCAAATACGCGGAGCTGCTGGCCATCATT  
GAAGAGCTGGGAAGGAGATCAGACCCACGTACGCAGGGAGCAAGAGTGCCATGGAGAGGCTGAAGCGCG  
GCATCATTACGCTAGAGGACTGGTTTCGGGAGTGCTTGGCAGAAACGGAACGGAATGCCAGATCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC204442 protein sequence  
Red=Cloning site Green=Tags(s)  
MSYKPNLAAHMPAAALNAAGSVHSPSTSMATSSQYRQLLSDYGPPSLGYTQGTGNSQVPQSKYAEALLAI  
EELGKEIRPTYAGSKSAMERLKRGIHARGLVRECLAETERNARS

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6014\\_g05.zip](https://cdn.origene.com/chromatograms/mk6014_g05.zip)

**Restriction Sites:** SgfI-MluI



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**Cloning Scheme:**


**ACCN:** NM\_004642

**ORF Size:** 345 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\\_004642.4](#)

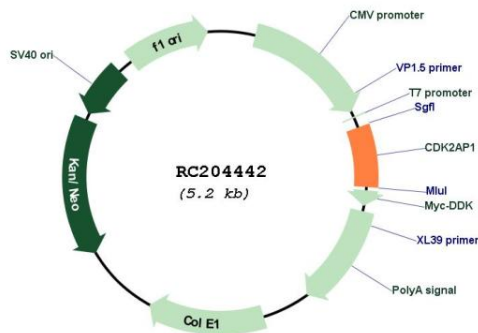
**RefSeq Size:** 1655 bp

**RefSeq ORF:** 348 bp

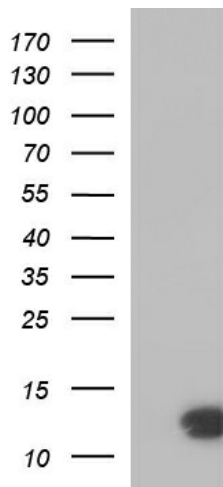
**Locus ID:** 8099  
**UniProt ID:** [O14519](#)  
**Cytogenetics:** 12q24.31  
**MW:** 12.4 kDa

**Gene Summary:** The protein encoded by this gene is a cyclin-dependent kinase 2 (CDK2) -associated protein which is thought to negatively regulate CDK2 activity by sequestering monomeric CDK2, and targeting CDK2 for proteolysis. This protein was found to also interact with DNA polymerase alpha/primase and mediate the phosphorylation of the large p180 subunit, which suggests a regulatory role in DNA replication during the S-phase of the cell cycle. This protein also forms a core subunit of the nucleosome remodeling and histone deacetylation (NURD) complex that epigenetically regulates embryonic stem cell differentiation. This gene thus plays a role in both cell-cycle and epigenetic regulation. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2012]

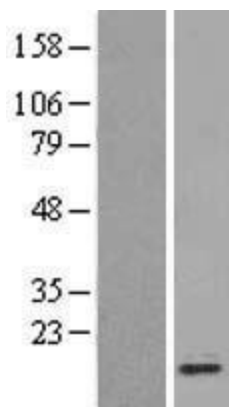
### Product images:



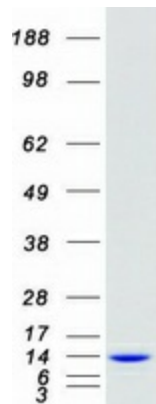
Circular map for RC204442



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CDK2AP1 (Cat# RC204442, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CDK2 (Cat# [TA590189]). Positive lysates [LY401472] (100ug) and [LC401472] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401472]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204442 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CDK2AP1 protein (Cat# [TP304442]). The protein was produced from HEK293T cells transfected with CDK2AP1 cDNA clone (Cat# RC204442) using MegaTran 2.0 (Cat# [TT210002]).