

Product datasheet for **RC204957**

Cyclin D1 (CCND1) (NM_053056) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Cyclin D1 (CCND1) (NM_053056) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Cyclin D1 |
| Synonyms: | BCL1; D11S287E; PRAD1; U21B31 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC204957 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGAACACCAGCTCCTGTGCTGCGAAGTGAAACCATCCGCCGCGGTACCCCGATGCCAACCTCCTCA
ACGACCGGGTGTGCGGGCCATGCTGAAGGCGGAGGAGACCTGCGCGCCCTCGGTGTCTACTTCAAATG
TGTGCAGAAGGAGGTCTGCCGTCCATGCGGAAGATCGTCGCCACCTGGATGCTGGAGGTCTGCGAGGAA
CAGAAGTGCAGGAGGAGGTCTCCCGCTGGCCATGAACTACCTGGACCGCTTCTGTGCTGGAGCCCG
TGAAAAAGAGCCGCTGCAGCTGCTGGGGCCACTTGCATGTTCTGTGGCCTCTAAGATGAAGGAGACCAT
CCCCCTGACGGCCGAGAAGCTGTGATCTACACCGACAACCTCCATCCGGCCCGAGGAGCTGCTGCAAATG
GAGCTGCTCCTGGTGAACAAGCTCAAGTGAACCTGGCCGCAATGACCCCGCACGATTTCTTGAACACT
TCCTCTCCAAAATGCCAGAGGCGGAGGAGAACAACAGATCATCCGAAACACGCGCAGACCTTCGTTGC
CCTCTGTGCCACAGATGTGAAGTTCATTTCCAATCCGCCCTCCATGGTGGCAGCGGGGAGCGTGGTGGCC
GCAGTGAAGGCCTGAACCTGAGGAGCCCAACAATTCTGTCTACTACCGCCTCACACGCTTCTCTCT
CCAGAGTGATCAAGTGTGACCCAGACTGCCTCCGGGCTGCCAGGAGCAGATCGAAGCCCTGCTGGAGTC
AAGCCTGCGCCAGGCCAGCAGAACATGGACCCCAAGGCCCGCCGAGGAGGAGAAAGAGGAGGAGGAGGAG
GTGGACCTGGCTTGCACACCCACCGACGTGCGGGACGTGGACATC

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC204957 protein sequence
Red=Cloning site Green=Tags(s)

```
MEHQLLCCEVETIRRAYPDANLLNDRVLRAMLKAEETCAPSVSYFKCVQKEVLPMSMRKIVATWMLEVCEE
QKCEEEVFPLAMNYLDRFLSLEPVKKSRLQLLGATCMFVASKMKETIPLTAEKLCIYTDNSIRPEELLQM
ELLLVNKLKWNLAAMTPHDFIEHFLSKMPEAEENKQIIRKHAQTFVALCATDVKFI SNPPSMVAAGSVVA
AVQGLNLRSPNNFLSYRRLTRFLSRVIKCDPDCLRACQEQIEALLESSLRQAQQNMDPKAAEEEEEEEEEE
VDLACTPTDVRDVIDI
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6065_a09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_053056

ORF Size: 885 bp

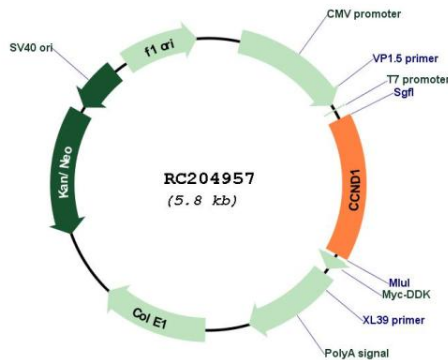
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

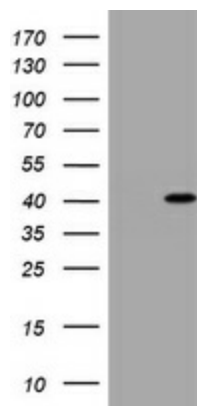
| | |
|-------------------------------|---|
| OTI Annotation: | This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene. |
| Components: | The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water). |
| Reconstitution Method: | <ol style="list-style-type: none">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_053056.1 , NP_444284.1 |
| RefSeq Size: | 4304 bp |
| RefSeq ORF: | 888 bp |
| Locus ID: | 595 |
| UniProt ID: | P24385 |
| Cytogenetics: | 11q13.3 |
| Domains: | cyclin_C, CYCLIN, cyclin |
| Protein Families: | Druggable Genome, Stem cell - Pluripotency, Stem cell relevant signaling - DSL/Notch pathway, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - Wnt Signaling pathway |
| Protein Pathways: | Acute myeloid leukemia, Bladder cancer, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, Focal adhesion, Glioma, Jak-STAT signaling pathway, Melanoma, Non-small cell lung cancer, p53 signaling pathway, Pancreatic cancer, Pathways in cancer, Prostate cancer, Small cell lung cancer, Thyroid cancer, Viral myocarditis, Wnt signaling pathway |
| MW: | 33.7 kDa |

Gene Summary:

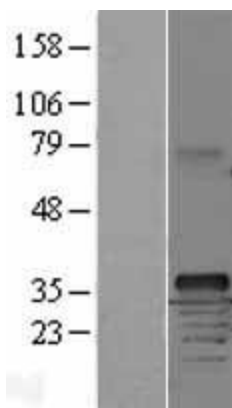
The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance throughout the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of human cancers. [provided by RefSeq, Dec 2019]

Product images:


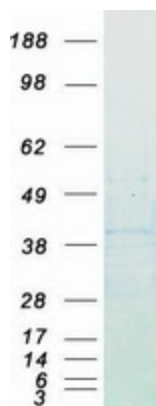
Circular map for RC204957



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CCND1 (Cat# RC204957, 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-CCND1 (Cat# [TA801655]). Positive lysates [LY403284] (100ug) and [LC403284] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY403284]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204957 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CCND1 protein (Cat# [TP304957]). The protein was produced from HEK293T cells transfected with CCND1 cDNA clone (Cat# RC204957) using MegaTran 2.0 (Cat# [TT210002]).