

Product datasheet for RC210316

Cyclin D2 (CCND2) (NM_001759) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Cyclin D2 (CCND2) (NM_001759) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cyclin D2
Synonyms:	KIAK0002; MPPH3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210316 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGCTGCTGTGCCACGAGGTGGACCCGGTCCGCAGGGCCGTGCGGGACCGCAACCTGCTCCGAGACG
ACCGCGTCCTGCAGAACCTGCTCACCATCGAGGAGCGCTACCTCCGCAGTGCTCCTACTCAAGTGCGT
GCAGAAGGACATCCAACCCTACATGCGCAGAATGGTGGCCACCTGGATGCTGGAGGTCTGTGAGGAACAG
AAGTGCGAAGAAGAGGTCTCCCTCTGGCCATGAATTACCTGGACCGTTTCTTGCTGGGTCCCGACTC
CGAAGTCCATCTGCAACTCCTGGGTGCTGTGTCATGTTCTGGCCTCCAAACTCAAAGAGACCAGCCC
GCTGACCGCGGAGAAGCTGTGCATTTACACCGACAACCTCATCAAGCCTCAGGAGCTGCTGGAGTGGGAA
CTGGTGGTGTGGGAAGTTGAAGTGGAACCTGGCAGCTGTCACTCCTCATGACTTCATTGAGCACATCT
TGCGCAAGCTGCCCCAGCAGCGGGAGAAGCTGTCTGATCCGCAAGCATGCTCAGACCTTCATTGCTCT
GTGTGCCACCGACTTTAAGTTTGCCATGTACCCACCGTCGATGATCGCAACTGGAAGTGTGGGAGCAGCC
ATCTGTGGGCTCCAGCAGGATGAGGAAGTGAGCTCGTCACTTGTGATGCCCTGACTGAGCTGCTGGCTA
AGATCACCAACACAGACGTGGATTGTCTCAAAGCTTGGCAGGAGCAGATTGAGGCGGTGCTCCTCAATAG
CCTGCAGCAGTACCGTCAGGACCAACGTGACGGATCCAAGTCGGAGGATGAACTGGACCAAGCCAGCACC
CCTACAGACGTGCGGGATATCGACCTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC210316 protein sequence
Red=Cloning site Green=Tags(s)

MELLCHEVDPVRRRAVRDRNLLRDDRVLQNLLTIEERYLPQCSYFKCVQKDIQPYMRRMVATWMLEVCEEQ
 KCEEEVFPLAMNYLDRFLAGVPTPKSHLQLLGAVCMFLASKLKETSPLTAEKLCIYTDNSIKPQELLEWE
 LVVLGKLGKWNLA AVTPHDFIEHILRKL PQQREKLSLIRKHAQTFIALCATDFK FAMYPPSMIATG SVGAA
 ICGLQQDEEVSSL TCDAL TELLAKITNTD V DCLKACQE QIEAVLLNSLQQYRQDQRD GSKSEDEL DQAST
 PTDV RDIDL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6267_d04.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001759

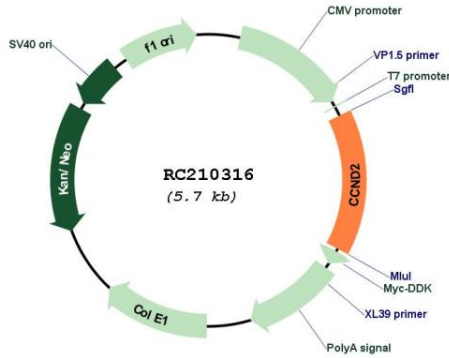
ORF Size: 867 bp

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.

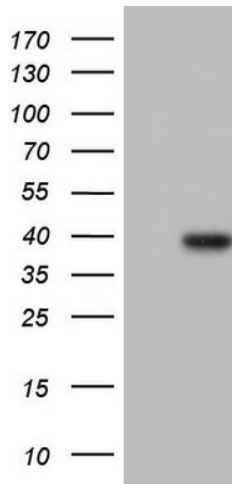
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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_001759.4
RefSeq Size:	6531 bp
RefSeq ORF:	870 bp
Locus ID:	894
UniProt ID:	P30279
Cytogenetics:	12p13.32
Domains:	cyclin_C, CYCLIN, cyclin
Protein Families:	Druggable Genome
Protein Pathways:	Cell cycle, Focal adhesion, Jak-STAT signaling pathway, p53 signaling pathway, Wnt signaling pathway
MW:	33.1 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 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. This cyclin forms a complex with CDK4 or CDK6 and functions as a regulatory subunit of the complex, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with and be involved in the phosphorylation of tumor suppressor protein Rb. Knockout studies of the homologous gene in mouse suggest the essential roles of this gene in ovarian granulosa and germ cell proliferation. High level expression of this gene was observed in ovarian and testicular tumors. Mutations in this gene are associated with megalencephaly-polymicrogyria-polydactyly-hydrocephalus syndrome 3 (MPPH3). [provided by RefSeq, Sep 2014]

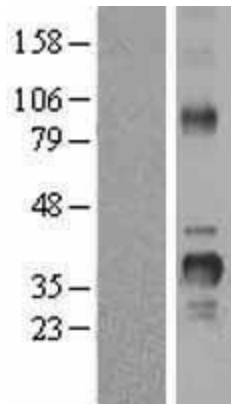
Product images:



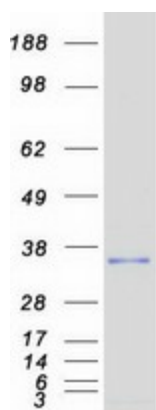
Circular map for RC210316



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CCND2 (Cat# RC210316, 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-CCND2(Cat# [TA806326]). Positive lysates [LY419750] (100ug) and [LC419750] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419750]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210316 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CCND2 protein (Cat# [TP310316]). The protein was produced from HEK293T cells transfected with CCND2 cDNA clone (Cat# RC210316) using MegaTran 2.0 (Cat# [TT210002]).