

## Product datasheet for **MG204246**

### Cdk4 (BC046336) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cdk4 (BC046336) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cdk4
Synonyms:	Crk3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG204246 representing BC046336 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGCCACTCGATATGAACCCGTGGCTGAAATTGGTGTGGTGCCTATGGGACGGTGTACAAAGCCC  
GAGATCCCCACAGTGGCCACTTTGTGGCCCTCAAGAGTGTGAGAGTTCCTAATGGAGGAGCAGCTGGAGG  
GGGCTTCCCGTCAGCACAGTTCGTGAGGTGGCCTTGTTAAGGAGGCTGGAGGCCTTTGAACATCCCAAT  
GTTGTACGGCTGATGGATGTCTGTGCTACTTCCCGAAGTATCGGGACATCAAGGTACCCTAGTGTGTTG  
AGCATATAGACCAGGACCTGAGGACATACTGGACAAAGCACCTCCACCGGCCTGCCGGTTGAGACCAT  
TAAGGATCTAATGCGTCAGTTTCTAAGCGGCCTGGATTTCTTCATGCAAAGTGCATTGTTACCGGGAC  
CTGAAGCCAGAGAACATTCTAGTGACAAGTAATGGGACCGTCAAGCTGGCTGACTTTGGCCTAGCTAGAA  
TCTACAGCTACCAGATGGCCCTCACGCCTGTGGTGGTTACGCTCTGGTACCGAGCTCCTGAAGTTCTTCT  
GCAGTCTACATACGCAACACCCGTGGACATGTGGAGCGTTGGCTGTATCTTTGCAGAGATGTTCCGTCGG  
AAGCCTCTCTTGTGAAAACCTGAAGCCGACCAGTTGGGAAAATCTTTGATCTCATTGGATTGCCTC  
CAGAAGACGACTGGCCTCGAGAGGTATCTCTACCTCGAGGAGCCTTTGCCCCAGAGGGCCTCGGCCAGT  
GCAGTCAGTGGTCCAGAGATGGAGGAGTCTGGAGCGCAGCTGCTACTGGAATGCTGACCTTTAACCCA  
CATAAGCGAATCTCTGCCTTCCGAGCCCTGCAGCACTCCTACCTGCACAAGGAGGAAAGCGACGCAGAG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG204246 representing BC046336  
 Red=Cloning site Green=Tags(s)

MAATRYEPVAEIGVGAYGTVYKARDPHSGHFVALKSVRVPNGGAAGGGLPVSTVREVALLRLEAFEHPN  
 VVRLMDVCATSRTRDRDIKVTLVFEHIDQLRXYLDKAPPPGLPVETIKDLMRQFLSGLDFLHANCIVHRD  
 LKPENILVTSNGTVKLADFGRLARIYSYQMALTPVVVTLWYRAPEVLLQSTYATPDMWSVGCIFAEMFRR  
 KPLFCGNSEADQLGKIFDLIGLPPEDDWPREVSLPRGAFAPRGPRPVQSVVPEMEESGAQLLLEMLTFNP  
 HKRISAFRALQHSYLHKEESDAE

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** BC046336

**ORF Size:** 911 bp

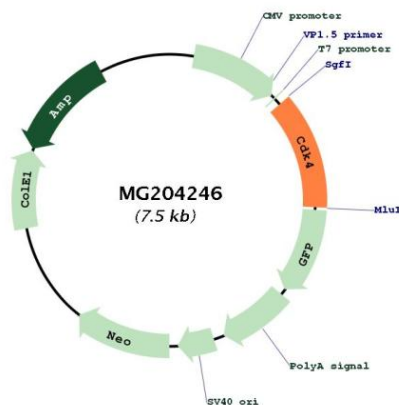
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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:**
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:** [BC046336](#), [AAH46336](#)
- RefSeq Size:** 1365 bp
- RefSeq ORF:** 911 bp
- Locus ID:** 12567
- Cytogenetics:** 10 D3
- Gene Summary:** Ser/Thr-kinase component of cyclin D-CDK4 (DC) complexes that phosphorylate and inhibit members of the retinoblastoma (RB) protein family including RB1 and regulate the cell-cycle during G(1)/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complexes and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase. Hypophosphorylates RB1 in early G(1) phase. Cyclin D-CDK4 complexes are major integrators of various mitogenic and antimitogenic signals. Also phosphorylates SMAD3 in a cell-cycle-dependent manner and represses its transcriptional activity. Component of the ternary complex, cyclin D/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (By similarity).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MG204246