

## Product datasheet for **RC401061**

### CDK4 (NM\_000075) Human Mutant ORF Clone

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	CDK4 (NM_000075) Human Mutant ORF Clone
Mutation Description:	N41S
Affected Codon#:	41
Affected NT#:	122
Nucleotide Mutation:	CDK4 Mutant (N41S), Myc-DDK-tagged ORF clone of Homo sapiens cyclin-dependent kinase 4 (CDK4) as transfection-ready DNA
Effect:	Melnom
Symbol:	CDK4
Synonyms:	CMM3; PSK-J3
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_000075
ORF Size:	909 bp
Restriction Sites:	Sgfl-Mlul



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ORF Nucleotide  
Sequence:

>RC401061 representing NM\_000075  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGCTACCTCTCGATATGAGCCAGTGGCTGAAATTGGTGTGGTGCCTATGGGACAGTGTACAAGGCC  
GTGATCCCACAGTGGCCACTTTGTGGCCCTCAAGAGTGTGAGAGTCCCCAGTGGAGGAGGAGGTGGAGG  
AGGCCTTCCCATCAGCACAGTTCGTGAGGTGGCTTTACTGAGGCGACTGGAGGCTTTTGAGCATCCCAAT  
GTTGTCCGGCTGATGGACGTCTGTGCCACATCCCGAACTGACCGGGAGATCAAGGTAACCCTGGTGTG  
AGCATGTAGACCAGGACCTAAGGACATATCTGGACAAGGCACCCACCAGGCTTGCCAGCCGAAACGAT  
CAAGGATCTGTGCGCCAGTTTCTAAGAGGCCTAGATTTCTTCATGCCAATGCATCGTTCACCGAGAT  
CTGAAGCCAGAGAACATTCTGGTGACAAGTGGTGAACAGTCAAGCTGGCTGACTTTGGCTGGCCAGAA  
TCTACAGCTACCAGATGGCACTTACACCCGTGGTTGTTACTCTGGTACCGAGCTCCCAGGTTCTTCT  
GCAGTCCACATATGCAACACCTGTGGACATGTGGAGTGTGGCTGTATCTTTCAGAGATGTTTCGTCGA  
AAGCCTCTCTTGTGGAACTCTGAAGCCGACCAGTTGGGCAAATCTTTGACCTGATTGGGCTGCCTC  
CAGAGGATGACTGGCCTCGAGATGTATCCCTGCCCCGTGGAGCCTTCCCCCAGAGGGCCCCGCCAGT  
GCAGTCGGTGGTACCTGAGATGGAGGAGTGGGAGCACAGCTGCTGCTGGAAATGCTGACTTTTAAACCA  
CACAAGCGAATCTCTGCCTTTCGAGCTCTGCAGCACTTATCTACATAAGGATGAAGGTAATCCGGAG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

## Protein Sequence:

>RC401061 representing NM\_000075  
Red=Cloning site Green=Tags(s)

MATSRYPVAEIGVGAYGTVYKARDPHSGHFVALKSVRVPSGGGGGGGLPISTVREVALLRLEAFEHPN  
VVRLMDVCATSRTDREIKVTLVFEHVDQLRXYLDKAPPPGLPAETIKDLMRQFLRGLDFLHANCIVHRD  
LKPENILVTSGGTVKLADFLARIYSYQMALTPVVVTLWYRAPEVLLQSTYATPVMWSVGCIFAEMFRR  
KPLFCGNSEADQLGKIFDLIGLPPEDDWPRDVSLPRGAFPPRPRPVQSVVPEMEESGAQLLLEMLTFNP  
HKRISAFRALQHSYLHKDEGNPE

SGPTRRRLLEQKLISEEDLAANDILDYKDDDDKV

## Restriction Sites:

Sgfl-MluI



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<b>Protein Pathways:</b>	Bladder cancer, Cell cycle, Chronic myeloid leukemia, Glioma, Melanoma, Non-small cell lung cancer, p53 signaling pathway, Pancreatic cancer, Pathways in cancer, Small cell lung cancer, T cell receptor signaling pathway, Tight junction
<b>MW:</b>	33.3 kDa
<b>Gene Summary:</b>	<p>The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein is highly similar to the gene products of <i>S. cerevisiae</i> cdc28 and <i>S. pombe</i> cdc2. It is a catalytic subunit of the protein kinase complex that is important for cell cycle G1 phase progression. The activity of this kinase is restricted to the G1-S phase, which is controlled by the regulatory subunits D-type cyclins and CDK inhibitor p16(INK4a). This kinase was shown to be responsible for the phosphorylation of retinoblastoma gene product (Rb). Mutations in this gene as well as in its related proteins including D-type cyclins, p16(INK4a) and Rb were all found to be associated with tumorigenesis of a variety of cancers. Multiple polyadenylation sites of this gene have been reported. [provided by RefSeq, Jul 2008]</p>