

## Product datasheet for **RC402573**

### CDK7 (NM\_001799) Human Mutant ORF Clone

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	CDK7 (NM_001799) Human Mutant ORF Clone
Mutation Description:	Q123X
Affected Codon#:	123
Affected NT#:	367
Nucleotide Mutation:	CDK7 Mutant (Q123X), Myc-DDK-tagged ORF clone of Homo sapiens cyclin-dependent kinase 7 (CDK7) as transfection-ready DNA
Effect:	Poenil proein defiieny
Symbol:	CDK7
Synonyms:	CAK; CAK1; CDKN7; HCAK; MO15; p39MO15; STK1
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_001799
ORF Size:	366 bp
Restriction Sites:	Sgfl-Mlul



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**ORF Nucleotide Sequence:**

>RC402573 representing NM\_001799  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCTCTGGACGTGAAGTCTCGGGCAAAGCGTTATGAGAAGCTGGACTTCCTTGGGGAGGGACAGTTTG  
 CCACCGTTTACAAGGCCAGAGATAAGAACACCAACCAAAATTGTCGCCATTAAGAAAATCAAACCTGGACA  
 TAGATCAGAAGCTAAAGATGGTATAAATAGAACCCTTAAGAGAGATAAAAATTATTACAGGAGCTAAGT  
 CATCCAAATATAATTGGTCTCCTTGATGCTTTTGGACATAAATCTAATATTAGCCTTGTCTTTGATTTTA  
 TGGAAACTGATCTAGAGGTTATAATAAAGGATAATAGTCTTGTGCTGACACCATCACACATCAAAGCCTA  
 CATGTTGATGACTCTT

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

**Protein Sequence:**

>RC402573 representing NM\_001799  
 Red=Cloning site Green=Tags(s)

MALDVKSRAKRYEKLDLFLGEGQFATVYKARDKNTNQIIVAIAIKKIKLGHRSEAKDGINRTALREIKLLQELS  
 HPNIIGLLDAFGHKSNIISLVDFMETDLEVIKDNSLVLP SHIKAYMLMTL

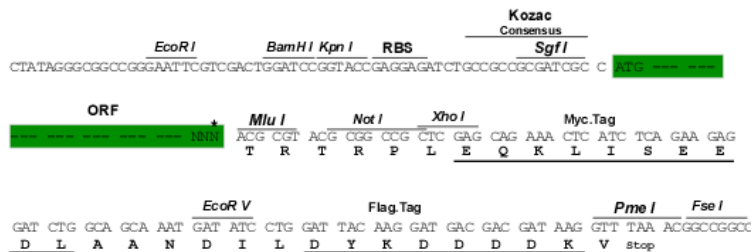
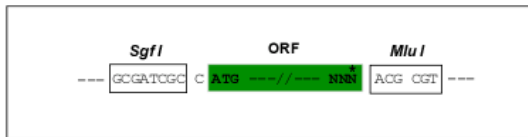
**SGP**TRRRLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**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).

**RefSeq:** [NP\\_001790](#)

**RefSeq Size:** 366 bp

**RefSeq ORF:** 1041 bp

**Locus ID:** 1022

**Cytogenetics:** 5q13.2

**Domains:** pkinase, TyrKc, S\_TKc

**Protein Families:** Druggable Genome, Protein Kinase, Stem cell - Pluripotency, Transcription Factors

**Protein Pathways:** Cell cycle, Nucleotide excision repair

**MW:** 13.4 kDa

**Gene Summary:** The protein encoded by this gene is a member of the cyclin-dependent protein kinase (CDK) family. CDK family members are highly similar to the gene products of *Saccharomyces cerevisiae* cdc28, and *Schizosaccharomyces pombe* cdc2, and are known to be important regulators of cell cycle progression. This protein forms a trimeric complex with cyclin H and MAT1, which functions as a Cdk-activating kinase (CAK). It is an essential component of the transcription factor TFIIH, that is involved in transcription initiation and DNA repair. This protein is thought to serve as a direct link between the regulation of transcription and the cell cycle. [provided by RefSeq, Jul 2008]