

Product datasheet for **SC323465**

CDK7 (NM_001799) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDK7 (NM_001799) Human Untagged Clone
Tag:	Tag Free
Symbol:	CDK7
Synonyms:	CAK; CAK1; CDKN7; HCAK; MO15; p39MO15; STK1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC323465 sequence for NM_001799 edited (data generated by NextGen Sequencing)

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ATGGCTCTGGACGTGAAGTCTCGGGCAAAGCGTTATGAGAAGCTGGACTTCCTTGGGGAG
GGACAGTTTTGCCACCGTTTACAAGGCCAGAGATAAGAACACCAACCAAATTTGTCGCCATT
ATGAAAATCAAACCTTGGACATAGATCAGAAGCTAAAGATGGTATAAATAGAACCCTTA
AGAGAGATAAAATTATTACAGGAGCTAAGTCATCCAAATATAATTGGTCTCCTTGATGCT
TTTGGACATAAATCTAATATTAGCCTTGCTTTGATTTTATGGAACTGATCTAGAGGTT
ATAATAAAGGATAATAGTCTTGTGCTGACACCATCACACATCAAAGCCTACATGTTGATG
ACTCTTCAAGGATTAGAATATTTACATCAACATTGGATCCTACATAGGGATCTGAAACCA
AACAACTTGTTGCTAGATGAAAATGGAGTTCTAAAACCTGGCAGATTTTGGCCTGGCCAAA
TCTTTTGGGAGCCCAATAGAGCTTATACACATCAGGTTGTAACCAGGTGGTATCGGGCC
CCCGAGTTACTATTTGGAGCTAGGATGTATGGTGTAGGTGTGGACATGTGGGCTGTTGGC
TGTATATTAGCAGAGTTACTTCTAAGGGTTCCTTTTTTGGCAGGAGATTGAGACCTTGAT
CAGCTAACAAAGAAATTTTAAAACCTTTGGGCACACCAACTGAGGAACAGTGGCCGGACATG
TGTAGTCTTCCAGATTATGTGACATTTAAGAGTTTCCCTGGAATACCTTTGCATCACATC
TTCAGTGCAGCAGGAGACGACTTACTAGATCTCATACAAGGCTTATTCTTATTTAATCCA
TGTGCTCGAATTACGGCCACACAGGCACTGAAAATGAAGTATTTTCAGTAATCGGCCAGGG
CCAACACCTGGATGTCAGCTGCCAAGACCAAACCTGTCCAGTGGAAACCTTAAAGGAGCAA
TCAAATCCAGCTTTGGCAATAAAAAGGAAAAGAACAGAGGCCCTTAGAACAAAGGAGGATTG
CCCAAGAACTAATTTTTTAA

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Clone variation with respect to NM_001799.3
122 a=>t



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5' Read Nucleotide Sequence:	>OriGene 5' read for mutant NM_001799 unedited ACCGCCGTTGAGCAATGGGCGGTAGGCGGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAA CCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGGGTAGCTTTAAATT CGTGTTCCTGGGAGCTCGCCCTTTTCGGCTGGAGTCGGGCTTACGGCGCCGGATGGCTCTGGACGTG AAGTCTCGGGCAAAGCGTTATGAGAAGCTGGACTTCCTTGGGGAGGGACAGTTTCCACCCTTTACAAGG CCAGAGATAAAGAACCAACCAAAATTGTCGCCATTATGAAAATCAAACTTGGACATAGATCAGAAGCT AAAGATGGTATAAATAGAACCGCTTAAGAGAGATAAAATTTATTACAGGACCTAAGTCTTCCAAATATAA TTGTCCTCCTGGATGCTTTTGAACCTAATTCTAATATAACCCTGTTCTTTGATTTTATGGAACCGATTCT AAAGGTTATAATAAGATTAATGTCCTTGGGCTGACCCCTCCCCCTCAAGCCCTCATGTGGTAAATCTT CAAAGATTTGAAAAATAATCAAAAATGATACTAATAGGGGATCTAAAAAAAAAACTTTTTCGCGAAAAA AATAGGGTCAAACCTCGGGGAATGGCCTGGCCATCTTTTTCGAGCCCCATGGTCTAACCCCTGGGTACCCG TGTATGGGCCCCGGACTCTTTTACACGAGATTGTGTTGTGGGGCCCTTTCGCTTCTGCTAATAACAAAC TCCAAAGGCTTTTTCGCGATATACTCTGTCTCAAAATTTACTCTGCGCACCAGGACAGGGCGCAGCTA GTCCACATAACTAAAATCGGACACTTCACTCTGCGGGAGACATATATCACGAGTGTATCGG
Kinase Domain Sequence:	>SC323465 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation CCATGMGCAATGGGCGGTAGGCGGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTC AGAATTTTGTAAACGACTCACTATAGGGCGGCCGCAATTCGGCACGAGGGGTAGCTTTAAATTCGTGT TGTCTGGGAGCTCGCCCTTTTCGGCTGGAGTCGGGCTTACGGCGCCGGATGGCTCTGGACGTGAAGTC TCGGGCAAAGCGTTATGAGAAGCTGGACTTCCTTGGGGAGGGACA
Restriction Sites:	Please inquire
ACCN:	NM_001799
Insert Size:	1280 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 kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell, 2008 May p536-548.
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.
RefSeq:	<u>NM_001799.2</u> , <u>NP_001790.1</u>
RefSeq Size:	1427 bp
RefSeq ORF:	1041 bp
Locus ID:	1022
UniProt ID:	<u>P50613</u>
Cytogenetics:	5q13.2
Domains:	pkinese, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase, Stem cell - Pluripotency, Transcription Factors
Protein Pathways:	Cell cycle, Nucleotide excision repair
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 <i>Saccharomyces cerevisiae</i> <i>cdc28</i> , and <i>Schizosaccharomyces pombe</i> <i>cdc2</i> , 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]