

## Product datasheet for **MC200160**

### Cdk7 (BC004605) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cdk7 (BC004605) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Cdk7
Synonyms:	AI323415; AI528512; C230069N13; Cdkn7; Crk4
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>BC004605 CTTTAAATTCCTGCGGGGTGGAGGGCTTAGCTTGGGTGCCCGGGTCTGGTTTCTCACTCGCATGGCTGTG GACGTGAAGTCTCGAGCGAAGCGCTATGAGAACTGGACTTCTCGGAGAGGGACAGTTTGCACGGTCT ATAAGGCCAGGGACAAGAACACCAACCAATCGTCGCCATTAAGAAAATCAAACCTGGACACAGGTCAGA AGCTAAGGATGGAATAAATAGAACAGCCTTAAGGGAGATAAAGCTCTTACAGGAACCTAAGTCATCCAAAT ATAATTGGTCTCCTTGATGCATTTGGACATAAGCTAACATTAGCCTTGTCTTTGATTTTATGGAACTG ACCTCGAGGATCTGAAACCAACAACCTGTTGTTAGATGAGAATGGAGTTCTGAACTGGCAGATTTTGG CCTGGCCAAATCATTTGGGAGCCCAATAGGGCTTACACACATCAAGTTGTGACCAGATGGTACCGGGCT CCTGAGTTATTGTTTGGAGCTAGGATGTATGGTGTGGGAGTAGACATGTGGGCTGTTGGTTGTATATTG CAGAATTGCTTCTAAGGGTTCCATTTTTGCCTGGAGATTCAGATCTTGATCAGCTAACAAGGATATTTGA AACTCTGGGTACACCAACTGAAGAGCAGTGGCCTGACATGTGTAGTCTTCCCGATTATGTGACATTTAAG AGTTTCCCTGGGGTCCCCTGCAGCACATCTTCATCGCGGCTGGGACGACCTGCTGGAGCTCATCCAAG GCCTGTTCTTATTTAACCCTGTACGCGGACCACAGCCTCACAGGCATTGAAGACCAAGTACTTCAGTAA CCGCCCGGGCCAACACCTGGATGCCAGCTCCCAGCAAACTGTCGGTGGAGGCATTAAGGAACCG GCGAATCCAACCGTGGCAACAAAGCGGAAAAGAGCAGAGGCCCTTGAACAAGGAATATTGCCAAGAAGC TCATTTTTTAGTTGCAGCGAACAATGGACAGTTTCACTGCTGAAATAAATGATCCAAAGGCAATAATGG AAAAATAGTGAATATTAATGCTATAAGAGAGAACTTGTAAATATTCTACAGATGTAATAATGTAAAA CTACGGTTATTTTTATTAATGTATTTTACAATAAAAAAAAAAAAAAAAAA
Restriction Sites:	RsrII-NotI
ACCN:	BC004605
Insert Size:	930 bp



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<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">BC004605</a></u> , <u><a href="#">AAH04605</a></u>
<b>RefSeq Size:</b>	1170 bp
<b>RefSeq ORF:</b>	930 bp
<b>Locus ID:</b>	12572
<b>Cytogenetics:</b>	13 53.23 cM
<b>Gene Summary:</b>	<p>Serine/threonine kinase involved in cell cycle control and in RNA polymerase II-mediated RNA transcription. Cyclin-dependent kinases (CDKs) are activated by the binding to a cyclin and mediate the progression through the cell cycle. Each different complex controls a specific transition between 2 subsequent phases in the cell cycle. Required for both activation and complex formation of CDK1/cyclin-B during G2-M transition, and for activation of CDK2/cyclins during G1-S transition (but not complex formation). CDK7 is the catalytic subunit of the CDK-activating kinase (CAK) complex. Phosphorylates SPT5/SUPT5H, SF1/NR5A1, POLR2A, p53/TP53, CDK1, CDK2, CDK4, CDK6 and CDK11B/CDK11. CAK activates the cyclin-associated kinases CDK1, CDK2, CDK4 and CDK6 by threonine phosphorylation, thus regulating cell cycle progression. CAK complexed to the core-TFIIF basal transcription factor activates RNA polymerase II by serine phosphorylation of the repetitive C-terminal domain (CTD) of its large subunit (POLR2A), allowing its escape from the promoter and elongation of the transcripts. Phosphorylation of POLR2A in complex with DNA promotes transcription initiation by triggering dissociation from DNA. Its expression and activity are constant throughout the cell cycle. Upon DNA damage, triggers p53/TP53 activation by phosphorylation, but is inactivated in turn by p53/TP53; this feedback loop may lead to an arrest of the cell cycle and of the transcription, helping in cell recovery, or to apoptosis. Required for DNA-bound peptides-mediated transcription and cellular growth inhibition. [UniProtKB/Swiss-Prot Function]</p>