

## Product datasheet for **RC213809**

### **MCM7 (NM\_005916) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MCM7 (NM_005916) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MCM7
Synonyms:	CDC47; MCM2; P1.1-MCM3; P1CDC47; P85MCM; PNAS146; PPP1R104
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC213809 representing NM\_005916  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCACTGAAGGACTACGCGCTAGAGAAGGAAAAGTTAAGAAGTTCTTACAAGAGTTCTACCAGGATG  
 ATGAACTCGGGAAGAAGCAGTTCAAGTATGGGAACCAGTTGGTTCGGCTGGCTCATCGGGAACAGGTGGC  
 TCTGTATGTGGACCTGGACGACGTAGCCGAGGATGACCCCGAGTTGGTGGACTCAATTTGTGAGAATGCC  
 AGGCGCTACGCGAAGCTCTTTGCTGATGCCGTACAAGAGCTGCTGCCTCAGTACAAGGAGAGGGAAGTGG  
 TAAATAAAGATGTCTGGACGTTTACATTGAGCATCGGCTAATGATGGAGCAGCGGAGTCCGGACCTGG  
 GATGGTCCGAAGCCCCAGAACCAGTACCCTGCTGAACCTCATGCGCAGATTTGAGCTGTATTTTCAAGGC  
 CCTAGCAGCAACAAGCCTCGTGTGATCCGGGAAGTGGGGCTGACTCTGTGGGAAGTTGGTAACTGTGC  
 GTGAATCGTCACTCGTGTCTCTGAAGTCAAACCAAGATGGTGGTGGCCACTTACACTTGTGACCAGTG  
 TGGGGCAGAGACCTACCAGCCGATCCAGTCTCCACTTTTCATGCCTCTGATCATGTGCCAAGCCAGGAG  
 TGCCAAACCAACCGCTCAGGAGGGCGGCTGTATCTGCAGACACGGGGCTCCAGATTCATCAAATCCAGG  
 AGATGAAGATGCAAGAACATAGTGATCAGGTGCCTGTGGGAAATATCCCTCGTAGTATCACGGTGTGGT  
 AGAAGGAGAGAACAAGGATTGCCAGCCTGGAGACCAGTCAAGGCTCACTGGTATTTTCTTGCCAATC  
 CTGCGCACTGGTTCCGACAGGTGGTACAGGGTTACTCTCAGAAACCTACCTGGAAGCCATCGGATTG  
 TGAAGATGAACAAGAGTGAAGTATGAGTCTGGGGCTGGAGAGCTCACCAGGGAGGAGCTGAGGCAAT  
 TGCAGAGGAGGATTTCTACGAAAAGCTGGCAGCTTCAATCGCCCCAGAAATACGGGCATGAAGATGTG  
 AAGAAGCACTGCTGCTCTGCTAGTGGGGGATCCTGGTGGCCAAAGTCTCAGCTCCTGTACATATTGATCGAT  
 ACATCAACATCTGTCTGATGGGGATCCTGGTGGCCAAAGTCTCAGCTCCTGTACATATTGATCGAT  
 GGCGCCTCGCAGCCAGTACACAACAGCCGGGGCTCCTCAGGAGTGGGGCTTACGGCAGCTGTGCTGAGA  
 GACTCCGTGAGTGGAGAAGTACCTTAGAGGGTGGGGCCCTGGTGTGGCTGACCAGGGTGTGTGCTGCA  
 TTGATGAGTTCGACAAGATGGCTGAGGCCGACCGCACAGCCATCCACGAGGTCATGGAGCAGCAGACCAT  
 CTCCATTGCCAAGGCCGATTCTCACCACACTCAATGCCCGCTGCTCCATCCTGGCTGCCGCCAACCT  
 GCCTACGGGCGCTACAACCCTCGCCGACGCTGGAGCAGAACATACAGCTACCTGCTGCACTGCTCTCCC  
 GGTTTGACCTCCTCTGGCTGATTGAGGACCGCCCGACCGAGACAATGACCTACGGTTGGCCAGCACAT  
 TACCTATGTGCACCAGCACAGCCGCGAGCCCCCTCCAGTTTGAACCTCTGGACATGAAGCTCATGAGG  
 CGTTACATAGCCATGTGCCGCGAGAAGCAGCCATGGTGGCAGAGTCTCTGGCTGACTACATCACAGCAG  
 CATACTGTGAGATGAGGCGAGAGGCTTGGGCTAGTAAGGATGCCACCTATACTTCTGCCCGACCCCTGCT  
 GGCTATCCTGCGCCTTCCACTGCTCTGGCACGCTCTGAGAATGGTGGATGTGGTGGAGAAAGAAGATGTG  
 AATGAAGCCATCAGGCTAATGGAGATGTCAAAGGACTCTTTCTAGGAGACAAGGGGCGAGACAGCTAGGA  
 CTCAGAGACCAGCAGATGTGATTTGCCACCGTCCGTGAACTGGTCTCAGGGGGCCGAAGTGTCCGGTT  
 CTCTGAGGCAGAGCAGGCTGTGTATCTCGTGGCTTACACCCGCCCAGTTCAGGCGGCTCTGGATGAA  
 TATGAGGAGCTCAATGTCTGGCAGGTCAATGCTTCCCGGACACGGATCACTTTTGTCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC213809 representing NM\_005916  
Red=Cloning site Green=Tags(s)

MALKDYALEKEKVKKFLQEFYQDDELGKKQFKYGNQLVRLAHREQVALYVDLDDVAEDDPELVDSICENARRYAKLFADAVQELLPOYKEREVVNKDVLVYIEHRLMMEQSRDPGMVRSPQNQYPAELMRRFELYFQGPSSNKPRVIREVRADSVGKLVTVRGIVTRVSEVKPKMVVATYTCDCQGAETYQPIQSPTFMPLIMCPSQECQTNRSRGGRLYLQTRGSRFIKFQEMKMQEHSDDQVPVGNIPRSITVLVEGENTRIAQPGDHVSVTGIFLPI LRTGFRQVVQGLLSETYLEAHRIVKMNKSEDDSEGAGELTREELRQIAEEDFYEKLAASIAPEIYGHEDV KKALLLLLVGGVDQSPRGMKIRGNINICLMGDPGVAKSQLLSYIDRLAPRSQYTTGRGSSVGLTAAVLR DSVSGELTLEGGALVLADQGVCCIDEFDKMAEADRTAIHEVMEQQTISI AKAGIL TTLNARCSILAAANP AYGRYNRRSLEQNIQLPAALLSRFDLLWL IQDRPDRDNDLRLAQHITYVHQHSRQPPSQFELPDMKLMR RYIAMCREKQPMVPESLADYITAAAYVEMRREAWASKDATYTSARTLLAILRLSTALARL RMDVVVEKEDV NEAIRLMEMSKSLLGDKGQTARTQRPADVIFATVREL VSGGRSVRFSEAEQRCVSRGFTPAQFQAALDE YEELNVWQVNASRTRITFV

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6099\\_c09.zip](https://cdn.origene.com/chromatograms/mk6099_c09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



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

**ACCN:** NM\_005916

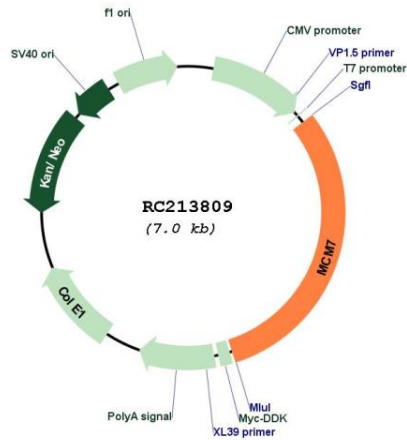
**ORF Size:** 2157 bp

**OTI Disclaimer:** 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](#)

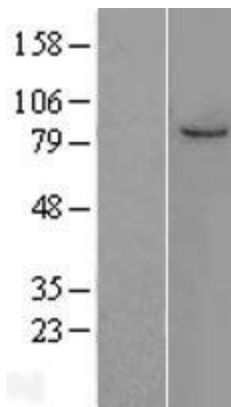
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<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>	<a href="#">NM_005916.5</a>
<b>RefSeq Size:</b>	2821 bp
<b>RefSeq ORF:</b>	2160 bp
<b>Locus ID:</b>	4176
<b>UniProt ID:</b>	<a href="#">P33993</a>
<b>Cytogenetics:</b>	7q22.1
<b>Domains:</b>	MCM, AAA
<b>Protein Families:</b>	Transcription Factors
<b>Protein Pathways:</b>	Cell cycle, DNA replication
<b>MW:</b>	81.1 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are essential for the initiation of eukaryotic genome replication. The hexameric protein complex formed by the MCM proteins is a key component of the pre-replication complex (pre_RC) and may be involved in the formation of replication forks and in the recruitment of other DNA replication related proteins. The MCM complex consisting of this protein and MCM2, 4 and 6 proteins possesses DNA helicase activity, and may act as a DNA unwinding enzyme. Cyclin D1-dependent kinase, CDK4, is found to associate with this protein, and may regulate the binding of this protein with the tumorsuppressor protein RB1/RB. Alternatively spliced transcript variants encoding distinct isoforms have been reported. [provided by RefSeq, Jul 2008]

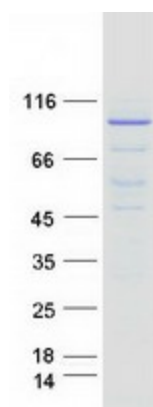
Product images:



Circular map for RC213809



Western blot validation of overexpression lysate (Cat# [LY401787]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213809 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MCM7 protein (Cat# [TP313809]). The protein was produced from HEK293T cells transfected with MCM7 cDNA clone (Cat# RC213809) using MegaTran 2.0 (Cat# [TT210002]).