

Product datasheet for **RC207097**

MCM6 (NM_005915) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MCM6 (NM_005915) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MCM6
Synonyms:	MCG40308; Mis5; P105MCM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC207097 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGACCTCGCGCGGCAGCGGAGCCGGCGCCGGCAGCCAGCACCTGGAGGTCCGCGACGAGGTGGCCG
 AGAAGTGCCAGAACTGTTCTTGGACTTCTTGGAGGAGTTTCAGAGCAGCGATGGAGAAATTAATACTT
 GCAATTAGCAGAGGAACTGATTCGTCCTGAGAGAAACACATTGGTTGTGAGTTTTGTGGACCTGGAACAA
 TTTAACAGCAACTTTCCACCACCATCAAGAGGAGTTCTATAGAGTTTACCCTTACCTGTGTCGGGCTT
 TGAAAACATTCGTCAAAGACCGTAAAGAGATCCCTCTTGCCAAGGATTTTTATGTTGCATTCCAAGACCT
 GCCTACCAGACACAAGATTCGAGAGCTCACCTCATCCAGAATTGGTTTGCTCACTCGCATCAGTGGGCAG
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 CAGGAGGAGATTCTTACTGGATACAAATAAATCAAGATTTGTTGATTTTCAAAGGTTTCGATTTCAAGAG
 ACCCAAGCTGAGCTTCTCGAGGGAGTATCCCCGCAGTTTAGAAGTAATTTAAAGGCTGAAGCTGTGG
 AATCAGCTCAAGCTGGTGACAAGTGTGACTTTACAGGGACACTGATTGTTGTGCCTGACGCTCCAAGCT
 TAGCACACCAGGAGCACGTGCAGAACTAATCCCGTGTCAAGTGGTGTGATGGATATGAGACAGAAGGC
 ATTCGAGGACTCCGGGCCCTTGGTGTAGGGACCTTTCTTATAGGCTGGTCTTCTTGCCTGCTGTGTTG
 CGCCAACCAACCAAGGTTTGGGGGAAAGAGCTCAGAGATGAGGAACAGACAGCTGAGAGCATTAAAGAA
 CCAATGACTGTGAAAGAATGGGAGAAAGTGTGAGATGAGTCAAGATAAAAACTATACCACAATCTT
 TGTACCAGCCTGTTCCCTACTATACATGGCAATGATGAAGTAAACGGGGTGTCTGCTGATGCTCTTTG
 GTGGCGTTCCAAAGACAACAGGAGAAGGGACCTCTTTCGAGGGGACATAAATGTTTGCATGTTGGTGA
 CCCAAGTACAGCTAAGAGCCAATTTCTCAAGCAGTGGAGGAGTTCAGCCCCAGAGCTGTCTACCCAGT
 GGTAAAGCGTCCAGTGTGCTGGCTTAAACAGCAGCTGTTGTGAGAGATGAAGAATCTCATGATTTGTCA
 TTGAGGCTGGAGCTTTGATGTTGGCTGATAATGGTGTGTTGTATTGATGAATTTGATAAGATGGACGT
 GCGGGATCAAGTTGCTATTCATGAAGCTATGGAACAGCAGACCATATCCATCACTAAAGCAGGAGTGAAG
 GCTACTCTGAACGCCCGGACGTCCATTTTGGCAGCAGCAAACCAATCAGTGGACACTATGACAGATCAA
 AATCATTGAAACAGAATATAAATTTGTCAGCTCCCATCATGTCCCGATTGATCTCTTCTTATCCTTGT
 GGATGAATGTAATGAGGTTACAGATTATGCCATTGCCAGGCGCATAGTAGATTTGCATTCAAGAATTGAG
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 CCAAGATTTCAAAGAGTCAGAGGACTTCAATTGTGGAGCAATATAAACATCTCCGCCAGAGAGATGGTTC
 TGGAGTGACCAAGTCTTCATGGAGGATTACAGTGCAGACGCTTGAGAGCATGATTCGCTCTCTGAAGCT
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 AATCAATCATCCGTGTGGAAACCTGATGTCAATCTAGATCAAGAGGAAGAGATCCAGATGGAGGTAGA
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 CTAACCTTATTGTGCTTACCTCAGAAAGGTGGAAGAAGAAGAGGACGAGTCAAGATTAAAGAGGAGCGA
 GCTTGTAACTGGTACTTGAAGGAAATCGAATCAGAGATAGACTCTGAAGAAGAAGTATAAATAAAAAA
 AGAATCATAGAGAAAGTTATTCATCGACTCACACTATGATCATGTTCTAATTGAGCTCACCCAGGCTG
 GATTGAAAGGCTCCACAGAGGGAAGTGAGAGCTATGAAGAAGATCCCTACTTGGTAGTTAACCTAACTA
 CTTGCTCGAAGAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207097 protein sequence
Red=Cloning site Green=Tags(s)

MDLAAAEPGAGSQHLEVRDEVAEKCKQLFLDFLEEFQSSDGEIKYLQLAEELIRPERNTLVVSFVDLEQ
FNQQLSTTIQEEFYRVYPYLCRALKTFVKDRKEIPLAKDFYVAFQDLPTRHKIRELTSSRIGLLTRISGQ
VVRTHPVHPELVSGTFLCLDCQTVIRDVEQQFKYTQPNICRNPVCANRRRFLDNTKSRFVDFQKVRIQE
TQAEIPRGSIPRSLEVILRAEAVESAQAGDKCDFGTGLIVVPDVSKLSTPGARAEATNSRVSGVDGYETEG
IRGLRALGVRDLSYRLVFLACCVAPTNPRFGGKELRDEEQTAESIKNQMTVKEWEKVFEMSQDKNLYHNL
CTSLFPTIHGNDDEVKRGVLLMLFGGVPKTTGEGTSLRGDINVCIVGDPSTAKSQFLKHVEEFSPRAYTTS
GKASSAAGLTAAYVRDEESHEFVIEAGALMLADNGVCCIDEFDKMDVRDQVAIHEAMEQQTISITKAGVK
ATLNARTSILAAANPISGHYDRSKSLKQINLSAPIMSRFDLFFILVDECNEVTDYAIARRIVDLHSRIE
ESIDRVYSLDDIRRYLLFARQFKPKISKESEDFIVEQYKHLRQRDGSVTKSSWRITVRQLESMIRLSEA
MARMHCCDEVQPKHVKEAFRLNKSIIRVETPDVNLQEEEEIQMEVDEGAGGINGHADSPAPVNGINGYN
EDINQESAPKASRLRGFSEYCRISNLIVLHLRKVEEEDEESALKRSELVNWYLKEIESEIDSEEELINKK
RIIEKVIHRLTHYDHVLIELTQAGLKGSTEGSESYEEDPYLVVNPNYLLED

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6020_f12.zip

Restriction Sites: Sgfl-Mlul

Cloning Scheme:



ACCN: NM_005915

ORF Size: 2463 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.

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:

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: [NM_005915.3](#)

RefSeq Size: 3791 bp

RefSeq ORF: 2466 bp

Locus ID: 4175

UniProt ID: [Q14566](#)

Cytogenetics: 2q21.3

Domains: MCM

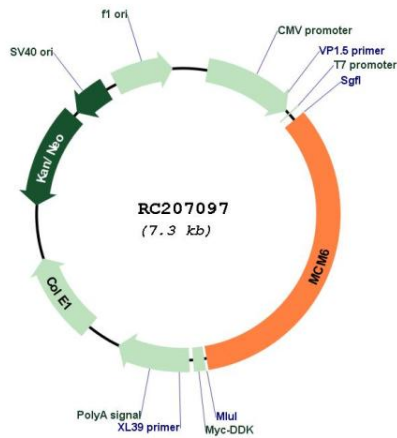
Protein Families: Stem cell - Pluripotency, Transcription Factors

Protein Pathways: Cell cycle, DNA replication

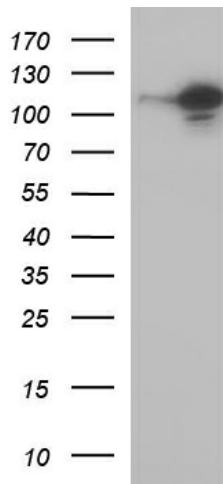
MW: 92.9 kDa

Gene Summary: 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 7 proteins possesses DNA helicase activity, and may act as a DNA unwinding enzyme. The phosphorylation of the complex by CDC2 kinase reduces the helicase activity, suggesting a role in the regulation of DNA replication. Single nucleotide polymorphisms in the intron regions of this gene are associated with differential transcriptional activation of the promoter of the neighboring lactase gene and, thereby, influence lactose intolerance in early adulthood. [provided by RefSeq, May 2012]

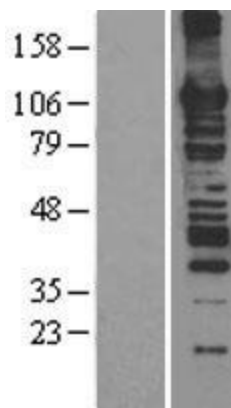
Product images:



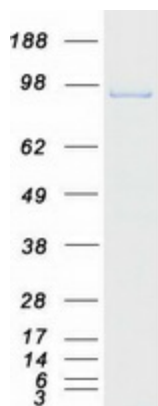
Circular map for RC207097



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MCM6 (Cat# RC207097, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MCM6 (Cat# [TA590213]). Positive lysates [LY401786] (100ug) and [LC401786] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401786]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207097 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MCM6 protein (Cat# [TP307097]). The protein was produced from HEK293T cells transfected with MCM6 cDNA clone (Cat# RC207097) using MegaTran 2.0 (Cat# [TT210002]).