

Product datasheet for **RC202506**

MCM2 (NM_004526) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	MCM2
Synonyms:	BM28; CCNL1; cdc19; CDCL1; D3S3194; DFNA70; MITOTIN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC202506 ORF sequence

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGGCGGAATCATCGGAATCCTTACCATGGCATCCAGCCCGGCCAGCGTCGGCGAGGCAATGATCCTC
TCACCTCCAGCCCTGGCCGAAGCTCCCGCGTACTGATGCCCTCACCTCCAGCCCTGGCCGTGACCTTCC
ACCATTTGAGGATGAGTCCGAGGGGCTCTAGGCACAGAGGGGCCCTGGAGGAAGAAGAGGATGGAGAG
GAGCTCATTGGAGATGGCATGGAAGGGACTACCGCGCCATCCAGAGCTGGACGCCTATGAGGCCGAGG
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TCTCAGCTTTGACATCTGTGTGGTGGAGGGACACCGTGGACCCAGTCCAGGACGAGATGCTGGCCCG
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ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC202506 protein sequence
Red=Cloning site Green=Tags(s)

MAESSESFTMASSPAQRRRGNDPLTSSPGRSSRRDALTSSPGRDLPPFEDESEGLLGTEGLEEEEDGE
ELIGDGMERDYRAIPELDAYEAAGLALDDEDVEELTASQREAAERAMRQRDREAGRGLGRMRGLLYDS
EEDDEERPAKRQVERATEDGEEDEEMIESIENLEDLKGHSVREWYSMAGPRLEIHHRFKNFLRTHVDSH
GHNVFKERISDMCKENRESLVVNYEDLAAREHVLAYFLPEAPAEALLQIFDEAALEVVLAMYPKYDRITNH
IHVRISHLPLVEELRSLRQLHLNQLIRTSGVVTCTGVLPLQLSMVKYCNKCNFVLGPFCQSQNQEVKPG
SCPECQSAGPFVNMEETIYQNYQRIRIQESPGKVAAGRLPRSKDAILLADLVDSCKPGDEIELTGIYHN
NYDGSNTANGFPVFATVILANHVAKKDNKVAVGELTDEDVKMITSLSKDQQIGEKIFASIAPSIYGHED
IKRGLALALFGGEPKNPGGKHKVGRGDINVLLCGDPGTAKSQFLKYIEKVSSRAIFTTGQASAVGLTAYV
QRHPVSREWTLAAGLVADRGVCLIDFDMNDQDRTSIHEAMEQQSISISKAGIVTSLQARCTVIAAA
NPIGGRYDPSLTFSENVDLTEPIISRFDILCVVRDTPVQDEMLARFVVGSHVRHHPNSKEEGLANGS
AAEPAMPNTYGVLEPLQEVLLKKYIYAKERVHPKLNQMDQDKVAKMYSDLRKESMATGSIPITVRHIESM
IRMAEAHARIHLRDYVIEDDVNMAIRVMLESFIDTQKFSVMRSMRKTTFARYLSFRDNNELLLFILKQLV
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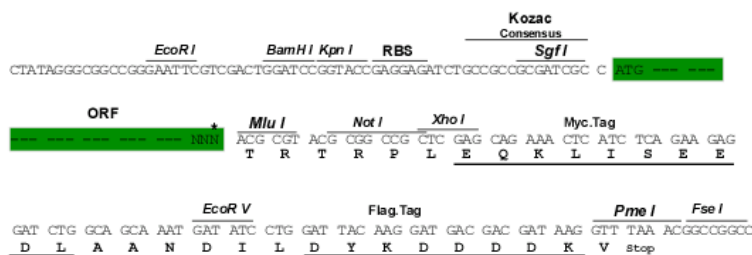
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6156_f06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



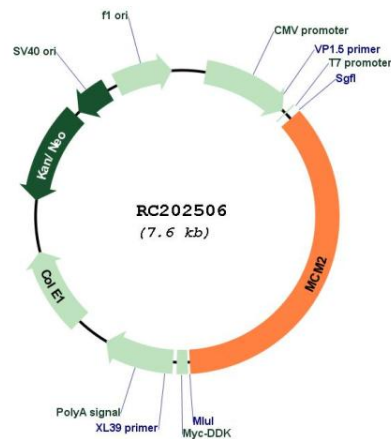
* The last codon before the Stop codon of the ORF

ACCN:	NM_004526
ORF Size:	2712 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_004526.4
RefSeq Size:	3504 bp
RefSeq ORF:	2715 bp
Locus ID:	4171
UniProt ID:	P49736
Cytogenetics:	3q21.3
Domains:	MCM
Protein Families:	Druggable Genome, Stem cell - Pluripotency, Transcription Factors
Protein Pathways:	Cell cycle, DNA replication
MW:	101.9 kDa

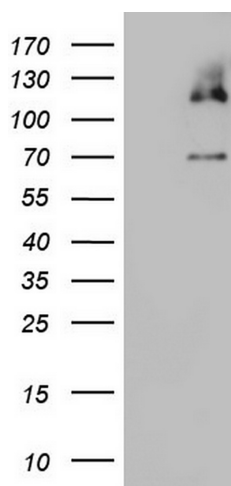
Gene Summary:

The protein encoded by this gene is one of the highly conserved mini-chromosome maintenance proteins (MCM) that are involved in the initiation of eukaryotic genome replication. The hexameric protein complex formed by 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. This protein forms a complex with MCM4, 6, and 7, and has been shown to regulate the helicase activity of the complex. This protein is phosphorylated, and thus regulated by, protein kinases CDC2 and CDC7. Multiple alternatively spliced transcript variants have been found, but the full-length nature of some variants has not been defined. [provided by RefSeq, Oct 2012]

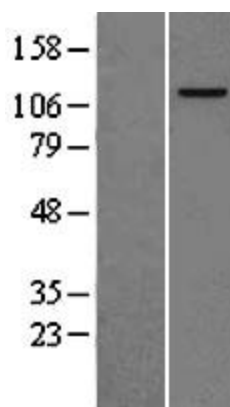
Product images:



Circular map for RC202506



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MCM2 (Cat# RC202506, 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-MCM2 (Cat# [TA805566]). Positive lysates [LY401445] (100ug) and [LC401445] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401445]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202506 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).