

Product datasheet for **SC107549**

MCM4 (NM_182746) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MCM4 (NM_182746) Human Untagged Clone
Tag:	Tag Free
Symbol:	MCM4
Synonyms:	CDC21; CDC54; hCdc21; IMD54; NKCD; NKGCD; P1-CDC21
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None



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Fully Sequenced ORF: >NCBI ORF sequence for NM_182746, the custom clone sequence may differ by one or more nucleotides

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ATGTCGTCCTCCCGGCGTCGACCCCGAGCCGCGCGCCGAGCCGGCGTGAAGGGCCACCCCGCCAGACGC
CTCGGAGTGAGGATGCCAGGTCATCTCCCTCTCAGAGACGTAGAGGCGAGGATTCACCTCCACGGGGGA
GTTGCAGCCGATGCCAACCTCGCTGGAGTGGACCTGCAGAGCCCTGCTGCGCAGGACGTGCTTTTCC
AGCCCTCCCAAATGCATTCTTCAGCTATCCCTCTTGACTTTGATGTTAGTTCACCACTGACATACGGCA
CTCCAGCTCTCGGGTAGAGGGAACCCCAAGAAGTGGTGTAGGGGCACACCTGTGAGACAGAGGCTGA
CCTGGGCTCTGCACAGAAGGGCTGCAAGTGGATCTGCAGTCTGACGGGCGAGCAGCAGAAGATATAGTG
GCAAGTGAGCAGTCTTAGGCCAAAACTTGTGATCTGGGGAACAGATGTAATGTGGCAGCATGCAAAAG
AAAACCTTCAGAGATTTCTTCAGCGTTTTATTGACCTCTGGCTAAAGAAGAAGAAAATGTTGGCATAGA
TATTACTGAACCTCTATACATGCAACGACTTGGGGAGATTAATGTTATTGGTGAGCCATTTTTAAATGTG
AACTGTGAACACATCAAATCATTTGACAAAAATTTGTACAGACAACCTCATCTTACCCACAGGAAGTTA
TTCCAACCTTTGACATGGCTGTCAATGAAATCTTCTTTGACCGTTACCCTGACTCAATCTTAGAACATCA
GATTCAAGTAAGACCATTCAACGCATTGAAGACTAAGAATATGAGAAACCTGAATCCAGAAGACATTGAC
CAGCTCATCACCATCAGCGGCATGGTGTACAGGACATCCAGCTGATTCCCGAGATGCAGGAGGCCCTTCT
TCCAGTGCCAAGTGTGTGCCACACGACCCGGGTGGAGATGGACCGCGGCCGATTGCAGAGCCAGTGT
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GCCTATTCGAGTCAATCCAAGAGTGAATGTAAGTCTGTCTACAAAACCCACATTGATGTCATTCTAT
TATCGGAAAACGGATGCAAAAACGCTGTCATGGCCTTGATGAAGAAGCAGAACAGAAAATTTTTTCAGAGA
AACGTGTGGAATTGCTTAAGGAACCTTCCAGGAAACAGACATTTATGAGAGGCTTGCTTCAGCCTTGGC
TCCAAGCATTTATGAACATGAAGATATAAAGAAGGGAATTTTGCTTCAGCTCTTTGGCGGACAAGGAAG
GATTTTAGTCACTGGAAGGGGCAAAATTCGGGCTGAGATCAACATCTTGCTGTGTGGCGACCCTGGTA
CCAGCAAGTCCCAGCTGCTGCAGTACGTGTACAACCTCGTCCCCAGGGGCCAGTACACGTCTGGGAAGGG
CTCCAGTGCAAGTGGCCTCACTGCGTACGTAATGAAAGACCTGAGACAAGGCAGCTGGTCTGCAGACA
GGTGTCTTGTCTGAGTGACAACGGCATCTGCTGTATCGATGAGTTCGACAAGATGAATGAAAGTACAA
GATCGGTATTGCATGAAGTCATGGAACAGCAGACTCTGTCCATTGCAAAGGCTGGGATCATCTGTCAGCT
CAATGCGCGCACCTCTGTCTGCGCAGCAGCAAATCCCATTGAGTCTCAGTGAATCCTAAAAAACACCC
ATTGAAAACATCCAGCTGCCTCATACTTTATTATCAAGGTTTGATTTGATCTTCCCTTGCTGGACCCTC
AGGACGAAGCCTATGACAGGCGTCTGGCTCACCACCTGGTTCGCACTGTAACCAGAGCGAGGAGCAGGC
AGAGGAGGAGCTCCTGGACATGGCGGTGCTAAAGGACTACATTGCCTACGCGCACAGCACCATCATGCCG
CGGCTAAGTGAGGAAGCCAGCCAGGCTCTCATCGAGGCTTATGTAGACATGAGGAAGATTGGCAGTAGCC
GGGGAATGGTTTTCTGCATACCCTCGACAGCTAGAGTCATTAATCCGCTTAGCAGAAGCCCATGCTAAAGT
AAGATTGTCTAACAAAGTTGAAGCCATTGATGTGGAAGAGGCCAAACGCCTCCATCGGGAAGCTCTGAAG
CAGTCTGCAACTGATCCCCGACTGGCATCGTGGACATATCTATTCTTACTACGGGGATGAGTGCCACCT
CTCGTAAACGGAAAGAAGAATTAGCTGAAGCATTGAAAAAGCTTATTTTATCTAAGGGCAAAACACCAGC
TCTAAAATACCAGCAACTTTTTGAAGATATTCGGGGACAATCTGACATAGCAATTAATAAAGATATGTTT
GAAGAAGCACTGCGTGCCCTGGCAGATGATGATTTCTGACAGTACTGGGAAGACCGTGCCTGTCTCT
GA
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5' Read Nucleotide Sequence:	>OriGene 5' read for NM_182746 unedited ACGAGGGCGCTACTCGCCAGGTGGACTCGGNAGTCCGCGAGCGTCGTCGGCAAGCGGCCG CCTTTCCACGGTACTCCGAGCACTATGTCGTCCCCGGCGTCGACCCCGAGCCGCCGCGGC AGCCGGCGTGGAAGGGCCACCCCGCCAGACGCCTCGGAGTGAGGATGCCAGGTCATCT CCCTCTCAGAGACGTAGAGGCGAGGATTCCACCTCCACGGGGGAGTTGCAGCCGATGCCA ACCTCGCCTGGAGTGGACCTGCAGAGCCCTGCTGCGCAGGACGTGCTGTTTTCCAGCCCT CCCCAAATGCATTCTTCAGCTATCCCTTTGACTTTGATGTTAGTTCACCACTGACATAC GGCACTCCAGCTCTCGGGTAGAGGGAACCCCAAGAAAGTGGTGTAGGGGCACACCTGTG AGACAGAGGCCTGACCTGGGCTCTGCACAGAAGGGCCTGCAAGTGGATCTGCAGTCTGAC GGGGCAGCAGCAGAAGATATAGTGGCAAGTGAGCAGTCTCTAGGCCAAAACTTGTGATC TGGGGAACAGATGTAATGTGGCAGCATGCAAAGAAAACTTTCAGAGATTTCTTCAGCGT TTTATTGACCCTCTGGCTAAAGAAGAAGAAAATGTTGGCATAGATATTACTGAACCTCTA TACATGCAACGACTTGGGGGAGATTAATGGTATTGGTGAGCCATTTTAAATGTGAACTG NGAAACACATCAAATCATTTGACAAAAATTTGTACAGACAACCTATCTTTTACCCACAGG AAGNTATTCCAACTTTTGACATGGCTGCAATGAAATCTTNTTTGANCGGTACCCTGACT CAATCTTA
Restriction Sites:	NotI-NotI
ACCN:	NM_182746
Insert Size:	4700 bp
OTI Disclaimer:	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).
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_182746.1</u> , <u>NP_877423.1</u>
RefSeq Size:	3417 bp
RefSeq ORF:	2592 bp
Locus ID:	4173
UniProt ID:	<u>P33991</u>
Cytogenetics:	8q11.21
Protein Families:	Stem cell - Pluripotency, Transcription Factors
Protein Pathways:	Cell cycle, DNA replication

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 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, 6 and 7 proteins possesses DNA helicase activity, and may act as a DNA unwinding enzyme. The phosphorylation of this protein by CDC2 kinase reduces the DNA helicase activity and chromatin binding of the MCM complex. This gene is mapped to a region on the chromosome 8 head-to-head next to the PRKDC/DNA-PK, a DNA-activated protein kinase involved in the repair of DNA double-strand breaks. Alternatively spliced transcript variants encoding the same protein have been reported. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (2) lacks a segment in the 5' UTR, when compared to variant 1. Both variants encode the same protein. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.