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# Product datasheet for RC210997

## MCM10 (NM_018518) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | MCM10 (NM_018518) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | MCM10 |
| **Synonyms:** | CNA43; DNA43; PRO2249 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

>RC210997 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGATGAGGAGGAAGACAATCTGTCTCTGCTGACCGCACTGCTGGAAGAAAATGAGTCAGCCTTGGATT
GTAATTCAGAAGAAAATAACTTCTTGACGCGGGAAAATGGCGAGCCCGACGCATTTGATGAGCTCTTTGA
TGCCGACGGCGACGGTGAATCTTATACAGAAGAGGCTGATGATGGAGAAACAGGAGAGACAAGAGACGAA
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AGTCAACTGAAAATAGGGTCCTCCCTGCTCCTGCCCCCAGGCGAGAGAAAACGAATGAAGAGTTGCAAGA
GGAATTAAGGAATTTGCAAGAGCAAATGAAGGCCTTACAAGAGCAGCTAAAAGTAACAACAATTAAACAG
ACAGCAAGCCCAGCCCGTCTGCAAAAATCCCCTGTAGAGAAGTCTCCCCGGCCACCTCTTAAGGAGAGGA
GAGTTCAGAGAATTCAGGAGTCAACATGCTTTTCTGCGGAGCTTGATGTCCCTGCGCTACCAAGAACCAA
GAGGGTGGCTCGAACACCAAAGGCTTCACCTCCAGATCCCAAAAGCTCATCTTCAAGGATGACAAGTGCA
CCCTCCCAACCCCTACAGACGATTTCTCGGAACAAACCTAGTGGGATAACTAGAGGTCAAATTGTGGGGA
CCCCAGGAAGTTCTGGGGAAACGACTCAACCCATCTGTGTGGAAGCCTTCTCTGGTCTGCGGCTCAGGCG
GCCTCGAGTATCCTCCACAGAAATGAACAAGAAAATGACCGGCCGAAAACTGATCAGACTGTCTCAGATC
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ACAATGTGTGTCCTTGTTCTTATTTGGAGAAGTTCACAAAGCGCTCTGGAAGACGGAGCAGGGGACTGTC
GTAGGGATCCTCAATGCCAACCCCATGAAGCCCAAGGATGGTTCAGAGGAGGTGTGTTTATCTATCGATC
ATCCTCAGAAGGTCTTAATTATGGGTGAAGCTCTTGACCTGGGAACCTGTAAAGCCAAGAAGAAGAATGG
AGAGCCGTGCACGCAGACTGTGAATTTGCGTGACTGTGAGTACTGTCAGTACCATGTCCAGGCTCAGTAC
AAGAAGCTCAGCGCAAAGCGTGCGGATCTGCAGTCCACCTTCTCTGGAGGACGAATTCCAAAGAAGTTTG
CCCGCAGAGGCACCAGCCTCAAAGAACGGCTGTGCCAAGATGGCTTTTACTACGGAGGGGTTTCTTCTGC
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GTTGTTAAGGGCACAAACTTGATCATCCAGGAAACACGGCAAAAACTCGGAATACCCCAGAAGAGCCTGT
CTTGCTCTGAGGAGTTCAAGGAACTGATGGACCTGCCGACGTGTGGAGCCAGGAACTTAAAACAACATTT
AGCCAAAGCCACAGCTTCAGGGATTATGGGGAGCCCAAAACCAGCCATCAAGTCCATCTCGGCCTCAGCA
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TTCTGCAGAGCTCAAGTGAAGTTGAGAGCCCAGCTGTGCCATCTTCATCAAGACAGCCCCCTGCTCAGCC
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GGTGTCTTGGAAGGAGATGATGTTCTCTTTTATGATGAGTCACCACCACCAAGACCAAAACTGAGTGCTT
TAGCAGAAGCCAAAAAGTTAGCTGCTATCACCAAATTAAGGGCAAGAGGCCAGGTTCTTACAAAAACAAA
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TGGAGACCTGCGTCAGTGAGCAGCATGAATACCACTGGCATGATGGTGTGAAGAGGTTTTTCAAATGTCC
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TGGGAACGGGACGGAATGCTAAAGGAAAAGACTGGTCCAAAGATAGGAGGAGAAACTCTGTTACCAAGAG
GAGAAGAACATGCTAAATTTCTGAACAGCCTTAAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC210997 protein sequence
Red=Cloning site Green=Tags(s)

MDEEEDNLSLLTALLEENESALDCNSEENNFLTRENGEPDAFDELFDADGDGESYTEEADDGETGETRDE
KENLATLFGDMEDLTDEEEVPASQSTENRVLPAPAPRREKTNEELQEELRNLQEQMKALQEQLKVTTIKQ
TASPARLQKSPVEKSPRPPLKERRVQRIQESTCFSAELDVPALPRTKRVARTPKASPPDPKSSSSRMTSA
PSQPLQTISRNKPSGITRGQIVGTPGSSGETTQPICVEAFSGLRLRRPRVSSTEMNKKMTGRKLIRLSQI
KEKMAREKLEEIDWVTFGVILKKVTPQSVNSGKTFSIWKLNDLRDLTQCVSLFLFGEVHKALWKTEQGTV
VGILNANPMKPKDGSEEVCLSIDHPQKVLIMGEALDLGTCKAKKKNGEPCTQTVNLRDCEYCQYHVQAQY
KKLSAKRADLQSTFSGGRIPKKFARRGTSLKERLCQDGFYYGGVSSASYAASIAAAVAPKKKIQTTLSNL
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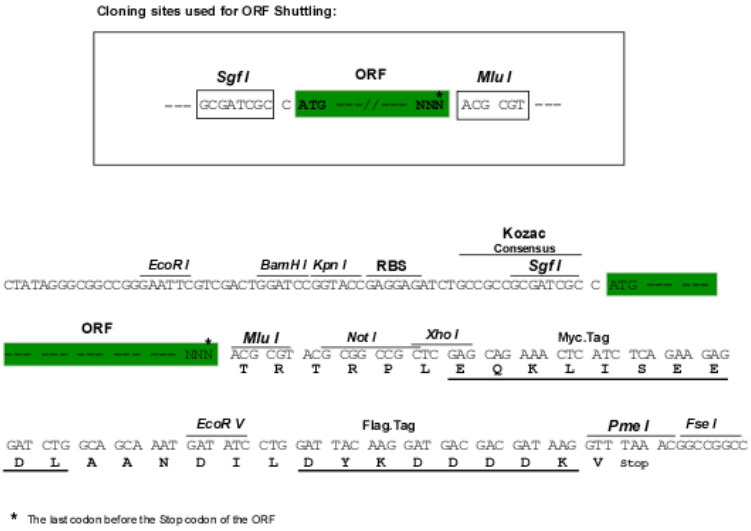
LLKQQKQRMLEMRRRKSEEIQKRFLQSSSEVESPAVPSSSRQPPAQPPRTGSEFPRLEGAPATMTPKLGR
GVLEGDDVLFYDESPPPRPKLSALAEAKKLAAITKLRARGQVLTKTNPNSIKKKQKDPQDILEVKERVEK
NTMFSSQAEDELEPARKKRREQLAYLESEEFQKILKAKSKHTGILKEAEAEMQERYFEPLVKKEQMEEKM
RNIREVKCRVVTCKTCAYTHFKLLETCVSEQHEYHWHDGVKRFFKCPCGNRSISLDRLPNKHCSNCGLYK
WERDGMLKEKTGPKIGGETLLPRGEEHAKFLNSLK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6201_c08.zip

**Restriction Sites:** SgfI-MluI

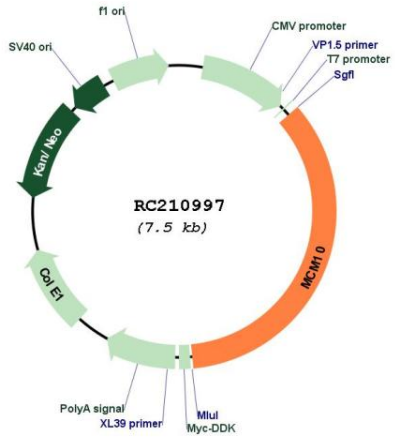
**Cloning Scheme:**



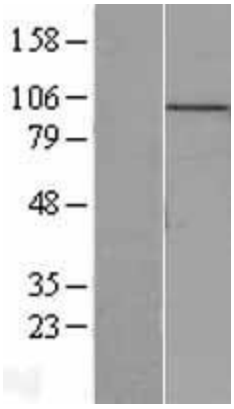
| | |
|---|---|
| **ACCN:** | NM_018518 |
| **ORF Size:** | 2625 bp |
| **OTI Disclaimer:** | The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (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.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_018518.5 |
| **RefSeq Size:** | 4559 bp |
| **RefSeq ORF:** | 2625 bp |
| **Locus ID:** | 55388 |
| **UniProt ID:** | Q7L590 |
| **Cytogenetics:** | 10p13 |
| **Protein Families:** | Stem cell - Pluripotency |
| **MW:** | 98.2 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 it may be involved in the formation of replication forks and in the recruitment of other DNA replication related proteins. This protein can interact with MCM2 and MCM6, as well as with the origin recognition protein ORC2. It is regulated by proteolysis and phosphorylation in a cell cycle-dependent manner. Studies of a similar protein in Xenopus suggest that the chromatin binding of this protein at the onset of DNA replication is after pre-RC assembly and before origin unwinding. Alternatively spliced transcript variants encoding distinct isoforms have been identified. [provided by RefSeq, Jul 2008]

## Product images:




Circular map for RC210997




Western blot validation of overexpression lysate (Cat# [LY402694]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210997 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).