

Product datasheet for **MG210756**

Mcm8 (NM_025676) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mcm8 (NM_025676) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mcm8
Synonyms:	5730432L01Rik
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>MG210756 representing NM_025676
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAGTGGTGCTTATAGAGGCAGAGTTTTGGACGAGGAAGATCCAAAGCTGGAAAAGAGGAAGAGGTG
 GTGGAACTTCTCAGGAAGGTGGAGAGAAAAGAGAAAACAGAGTTGACCTGAATGAAGCTTCAGGAAAGCA
 CGTTCTGTTTACAGTAATAACTCTCCCTTTATTGAGAAGATTCAAGCATTGAGAAATTTTACAAGG
 CATATCGACTTATACGATAAGGATGAAATAGAAAGAAAAGGAAGCATTGTTGGTGGATTTAAAGAACTGA
 CAAAAGCTGATGAAATAACTAATTGATACCCGATATAGAAAACGCACTAAGAGATGCCCTGAGAAAAC
 ACTGGCGTGTATGGGCTGGCAATACATCAGGTATTAACCTAAGGACCTTCAAAGGCATGCCGCCAATTA
 CAAGCTCAAGAGGGATTGCTAACGGTGGAGAGACAATGGTAAATGTACCACATATTTATGCAAGAGTGT
 ACAACTATGAGCCCTTGACACACCTCAAGAATATCCGAGCAACTGCTATGGGAAATACATCTCTATACG
 AGGGACTGTGGTCCGGGTCAGCAACATAAAGCCTCTTTGTACCAACATGGCTTTTCAGTGGCTGCATGT
 GGAGAGATTGAGAGCTTTCCTCTGCCAGATGGAAAATACACCCTTCTACAAAGTGTCTGTGCCTGCGT
 GCCGAGGGAGGTCATTTGCTCCACTGCGCAGCTCTCTCTCACAGTTACTGGACTGGCAGTTGATCAA
 AATCCAGGAGCTGATGTCTGATGCACAGAGAGAAGCTGGTCCGATCCCTCGGACGATAGAATGTGAAGT
 GTTCACGATCTTGATAGTGTGTCAGGAGATACAGTACTGTTACTGGAATTGTCAAAGTCTCCA
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 TAGCAACAGCAAGGGGCCGAAAGCACAGACTGCAGAAGATGGTTGCAAGCATGGGACACTGATGGAGTTC
 TCCCTTAAAGACCTCTATGCCATCCGAGAGATCCAGGCTGAAGAGAACCTGCTCAAGCTCGTTGTCAACT
 CACTCTGCTCCTCATTTTTGGTCATGAACTCGTCAAAGCAGGCTGACGTTAGCACTCTTGGCGGTAG
 CCAGAAGTACGCAGATGACAAAAACAGAATTCCTTCGAGGAGACCCACATGTCCTGATTGTTGGAGAT
 CCAGGCTTGGGGAAGAGTCAGATGCTACAGGCAGCATGCAACGTGGCGCCACGTGGTGTGTATGTTGTG
 GAAATACCACCACCAGCTCTGGTCTCACTGTGACTCTTTCAAAGGACAGTTCTCTGGAGATTTGCTTT
 GGAAGCTGGTGCCTTGTACTTGGTGACCAAGGCATCTGTGGAATAGATGAATTTGATAAAATGGGGAAC
 CAACATCAAGCCCTGTTAGAAGCCATGGAACAGCAGAGTATTAGCCTTGCAGAGGCTGGGGTAGTTTGA
 GCCTCCCTGCAAGAACTCCATTATTGCTGCTGCAAAATCCAGTCGGAGGACACTACAATAAAGCCAGAAC
 GGTTTCTGAGAATTTAAGATGGGGAGTGCCCTACTGTCCAGATTCGATTTGGTCTTTATCTTGTAGAT
 ACGCCAAATGAACAGCATGACCCTTACTTTCTGAACATGTGATCGCGATAAGAGCTGGGAAGCAGAAAG
 CGGTTAGCAGTGCCACAGTCACTCGTGTGCTCAGTCAAGACTCAAATACTTCTGTACTTGAAGTGGTTTC
 TGAGAAACCATTATCAGAAAGACTAAAGGTGGCTCCTGGAGAACAGACAGATCCGATTCACATCAGCTG
 TTGAGGAAGTACATTGGCTATGCACGGCAGTATGTCCACCAAGGTTATCTACGGACGCTGCTCAGGCC
 TTCAGGATTTCTACCTGGAGCTCCGCAAGCAGAGCCAGCGGTGGGACAGCTCACCATCACCCTCGGCA
 GCTGGAGTCTTTGATCCGTCTGACAGAGGCACGGGCAAGGTTAGAATTGAGAGAGGAAGCAACTAGAGAA
 GATGCTGAAGATATAATTGAAATTAAGAGCATAGCATGCTAGGAACTTACTCAGATGAATTCGAAACC
 TGGACTTTGAGCGATCCCAGCATGGCTCTGGGATGAGCAACAGGTC AACAGCAAAAAGATTTATTTCTGC
 TCTCAACAGCATTGCTGAAAGAACTTATAACAACATATTTCAATATCATCAACTTCGTGAGATTGCTAAA
 GAACTAAACATTGAGTTGCCGATTTTGAAGAACTTCATTGGATCACTGAATGACCAAGGTTATCTCTTGA
 AGAAAGGCCCAAAGATTTACCAACTTCAAATG

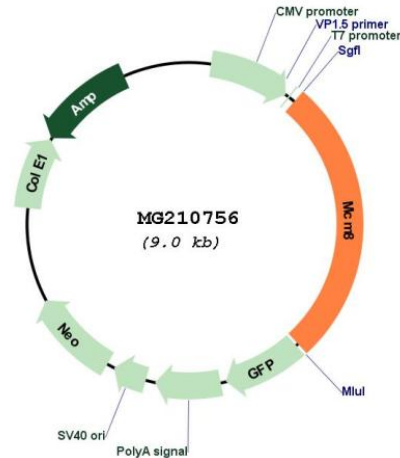
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG210756 representing NM_025676
Red=Cloning site Green=Tags(s)

MSGAYRGRGFGRGRFQSWKRGRGGGNFSGRWRERENRVDLNEASGKHASVYSNNSPFIEKIQAFEKFFTR
HIDL YDKDEIERKGSILVDFKELTKADEITNLIPDIENALRDAPEKTLACMGLAIHQVLTKDLERHAAEL
QAQEGLSNGGETMVNVP HIYARVYNYEPLTHLKNIRATCYGKYISIRGTVVRVSNIKPLCTNMAFQCAAC
GEIQSFPLPDGKYTLPTKCPVPACRGRSFAPLRSSPLTVTLDWQLIKIQELMSDAQREAGRIPRTIECEL
VHDLVDSCVPGDTVTVTGIVKVSNSEEGSRNKNDKCMFLLYIEANSVSNKGPKAQTAEDGCKHGTLMF
SLKDLYAIREIQAEENLLKLVVNSLCPVIFGHEL VKAGLTLALFGGSQKYADDKNRIPIRGDPHVLIVGD
PGLGKSQMLQAACNVAPRGVYVCGNTTSSGLTVTL SKDSSSGDFALEAGALVLGDQGCIGIDEFDKMG
QHQALLEAMEQQSISLAKAGVVC SLPARTSIIAAANPVGGHYNKARTVSENLMKGSALLSRFDLVFILLD
TPNEQHDHLLSEHVIAIRAGKQKAVSSATVTRVLSQDSNTSVLEV VSEKPLSERLKVAPGEQTDPIPHQL
LRKYIGYARQYVHPRLSTDAALQDFYLELRKQSQRVGSSPITTRQLESLIRL TEARARLELREEATRE
DAEDIIIEIMKHSMLGTYSDEFGNLD FERSQHSGMSNRSTAKRFISALNSIAERTYNNIFQYHQLRQIAK
ELNIQVADFENFIGSLNDQGYLLKKGPKIYQLQTM

TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

Plasmid Map:


ACCN: NM_025676

ORF Size: 2415 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_025676.2](#)

RefSeq Size: 3203 bp

RefSeq ORF: 2418 bp

Locus ID: 66634

UniProt ID: [Q9CWW1](#)

Cytogenetics: 2 F2

Gene Summary:

Component of the MCM8-MCM9 complex, a complex involved in the repair of double-stranded DNA breaks (DBSs) and DNA interstrand cross-links (ICLs) by homologous recombination (HR). Required for DNA resection by the MRE11-RAD50-NBN/NBS1 (MRN) complex by recruiting the MRN complex to the repair site and by promoting the complex nuclease activity. Probably by regulating the localization of the MNR complex, indirectly regulates the recruitment of downstream effector RAD51 to DNA damage sites including DBSs and ICLs. The MCM8-MCM9 complex is dispensable for DNA replication and S phase progression. However, may play a non-essential for DNA replication: may be involved in the activation of the prereplicative complex (pre-RC) during G(1) phase by recruiting CDC6 to the origin recognition complex (ORC) (By similarity). Probably by regulating HR, plays a key role during gametogenesis (PubMed:22771120). Stabilizes MCM9 protein (By similarity). [UniProtKB/Swiss-Prot Function]