

## Product datasheet for **MG210873**

### **Mcm8 (BC046780) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Mcm8 (BC046780) 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)



[View online »](#)

**ORF Nucleotide Sequence:**

>MG210873 representing BC046780  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGTGGTGCTTATAGAGGCAGAGTTTTGGACGAGGAAGATCCAAAGCTGGAAAAGAGGAAGAGGTG  
 GTGGAACTTCTCAGGAAGGTGGAGAGAAAAGAGAAAACAGAGTTGACCTGAATGAAGCTTCAGGAAAGCA  
 CGTTCTGCACAAGCCTCACAACCGTTACTTCAACAGTCAACATTGGATCAGTTTATCCCGTATAAGGGC  
 TGGAAAGCTTACTTCTCTGAAGTTACAGTAATAACTCTCCCTTTATTGAGAAGATTCAAGCATTGAGA  
 AATTTTTCACAAGGCATATCGACTTATACGATAAGGATGAAATAGAAAAGAAAAGGAAGCATTGTTGGTGA  
 TTTTAAAGAACTGACAAAAGCTGATGAAATAACTAAGTATGATACCGGATATAGAAAACGCACTAAGAGAT  
 GCCCTGAGAAAACACTGGCGTGTATGGGGCTGGCAATACATCAGGTATTAAGTAAAGGACCTTAAAGGC  
 ATGCCCGCAATTACAAGCTCAAGAGGGATTGTCTAACGGTGGAGAGACAATGGTAAATGTACCACATAT  
 TTATGCAAGAGTGTACAACCTATGAGCCCTTGACACACCTCAAGAATATCCGAGCAACTTGCTATGGGAAA  
 TACATCTCTATACGAGGGACTGTGGTCCGGGTGAGCAACATAAAGCCTCTTTGCACCAACATGGCTTTTC  
 AGTGCGCTGCATGTGGAGAGATTGAGAGCTTCTCTGCCAGATGGAAAATACACCTTCTTACAAAAGTG  
 TCCTGTGCCTGCGTGGCAGGGAGGTCAATTTGCTCCACTGCGCAGCTCTCCTCTCACAGTTACACTGGAC  
 TGGCAGTTGATCAAAATCCAGGAGCTGATGTCTGATGCACAGAGAGAAGCTGGTCGGATCCCTCGGACGA  
 TAGAATGTGAAGTGTTCACGATCTTGTAGATAGTTGTGTCCCAGGAGATACAGTGACTGTTACTGGAAT  
 TGTCAAAGTCTCCAATTTGAAGAAGTTCTCGAAATAAGAATGATAAGTGCATGTTCTTTTGTACATT  
 GAGGCAAATTTCTGTTAGCAACAGCAAGGGGCCGAAAGCACAGACTGCAGAAGATGGTTGCAAGCATGGGA  
 CACTGATGGAGTTCTCCCTTAAAGACCTCTATGCCATCCGAGAGATCCAGGCTGAAGAGAACCTGTCCAA  
 GCTCGTTGTCAACTCACTCTGCTCTGCTATTTTTGGTCAATGAACTCGTCAAAGCAGGTCTGACGTTAGCA  
 CTCTTTGGCGGTAGCCAGAAGTACGCAGATGACAAAACAGAATTCCTTTGAGGAGACCCACATGTCC  
 TGATTGTTGGAGATCCAGGCTTGGGGAAGAGTCAAGTGTACAGGCAGCATGCAACGTGGCGCCACGTGG  
 TGTGTATGTTTGGAAAATACCACCACCAGCTCTGGTCTCACTGTGACTCTTTCAAAGGACAGTTCTCT  
 GGAGATTTTGTGTTGGAAGCTGGTGCCTTGTACTTGGTGACCAAGGCATCTGTGGAATAGATGAATTTG  
 AAAAAATGGGGAACCAACATCAAGCCCTGTTAGAAGCCATGGAACAGCAGAGTATTAGCCTTGGCAAGGC  
 TGGGGTAGTTTGCAGCCTCCCTGCAAGAAGTCCATTGTTGCTGCTGCAAATCCAGTCGGAGGACACTAC  
 AATAAAGCCAGAACGGTTTCTGAGAATTTAAAGATGGGGAGTGCCTACTGTCCAGATTCGATTTGGTCT  
 TTATCTTGTTAGATACGCCAAATGAACAGCATGACCCTTACTTTCTGAACATGTGATCGCGATAAGAGC  
 TGGGAAGCAGAAAAGCGTTAGCAGTGCCACAGTCACTCGTGTGCTCAGTCAAGACTCAAATACTTCTGTA  
 CTTGAAGTGGTTTCTGAGAAACCATTATCAGAAAGACTAAAGGTGGCTCCTGGAGAACAGACAGATCCGA  
 TTCCACATCAGCTGTTGAGGAAGTACATTGGCTATGCACGGCAGTATGTCCACCAAGGTTATCTACGGA  
 CGCTGCTCAGGCCCTTCAAGATTCTACCTGGAGCTCCGCAAGCAGAGCCAGCGGTGGGAGCTCACCC  
 ATCACCCTCGGCAGCTGGAGTCTTTGATCCGTCTGACAGAGGCACGGGCAAGGTTAGAATTGAGAGAGG  
 AAGCAACTAGAGAAGATGCTGAAGATATAATTGAAATTAAGAGCATAGCATGCTAGGAACTTACTCAGA  
 TGAATTCGAAAACCTGGACTTTGAGCGATCCCAGCATGGCTCTGGGATGAGCAACAGGTCAACAGCAAAA  
 AGATTTATTTCTGCTCTCAACAGCATTGCTGAAAGAAGTATAACAACATATTTCAATATCATCAACTTC  
 GTCAGATTGCTAAAGAAGTAAACATTCAAGTTGCCGATTTTGAAGAACTTCAATGGATCACTGAATGACCA  
 AGGTTATCTTTGAAGAAAGGCCAAAGATTTACCAACTTCAAATATG

**ACCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >MG210873 representing BC046780  
 Red=Cloning site Green=Tags(s)

```

MSGAYRGRGFGRGRFQSWKRGRGGGNFSGRWRERENVDLNEASGKHASAQASQPLLQQSTLDQFIPYKG
WKLYFSEVYSNNSPFIEKIQAFEKFFTRHIDL YDKDEIERKGSILVDFKELTKADEITNLIPDIENALRD
APEKTLACMGLAIHQVLTKDLERHAAELQAQEGLSNGGETMVNVPHIYARVYNYEPLTHLKNIRATCYGK
YISIRGTVVRVSNIKPLCTNMAFQCAACGEIQSFPLPDGKYTLPTKCPVPACRGRSFAPLRSSPLTVTLTLD
WQLIKIQELMSDAQREAGRIPRTIECELVHDLVDSCVPGDTVTVTGIVKVSNSEEGSRNKNDKCMFLLYI
EANSVSNKGPKAQTAEDGCKHGTLMFSLKDLYAIREIQAEENLLKLVVNSLCPVIFGHELVKAGLTLA
LFGGSQKYADDKNRIPIRGDPHVLIVGDPGLGKSQMLQAACNVAPRGVYVCGNTTSSGLTVTLTKDSSS
GDFALEAGALVLGDQIGCIDEFDKMGNHQALLEAMEQQSISLAKAGVVCSLPARTSIVAAANPVGGHY
NKARTVSNLKMGSALLSRFDLVFILLDTPNEQHDHLLSEHVIAIRAGKQKAVSSATVTRVLSQDSNTSV
LEVVSEKPLSERLKVAPGEQTDPIPHQLLRKYIGYARQYVHPRLSTDAALQDFYLELRKQSRVGGSSP
ITTRQLESLIRL TEARARLELREEREDAEDIEIMKHSMLGTYSDEFGNLDFERSQHGSGMSNRSTAK
RFISALNSIAERTYNNIFQYHQLRQIAKELNIQVADFENFIGSLNDQGYLLKKGPKIYQLQTM
  
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

Cloning Scheme:



ACCN: BC046780

ORF Size: 2501 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:** [BC046780](#), [AAH46780](#)

**RefSeq Size:** 2908 bp

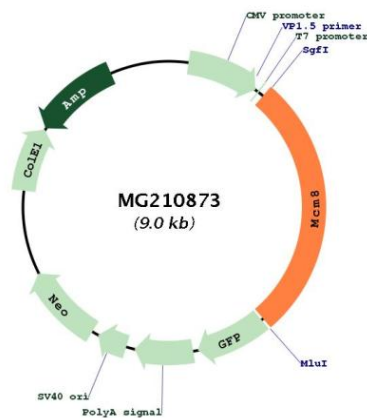
**RefSeq ORF:** 2501 bp

**Locus ID:** 66634

**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]

**Product images:**



Circular map for MG210873