

## Product datasheet for **MG220090**

### Mcm9 (NM\_027830) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Mcm9 (NM\_027830) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Mcm9  
**Synonyms:** 9030408O17Rik; Gm235; Mcmdc1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG220090 representing NM\_027830  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

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ACTGATGCTGCAGGAACCAGGGTTAGAGGGGAATCTCACCTTTTATTGGTTGGGGATCCTGGCACAGGGA  
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AAGAGATGAGGAAAAAGCCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG220090 representing NM\_027830  
 Red=Cloning site Green=Tags(s)

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```

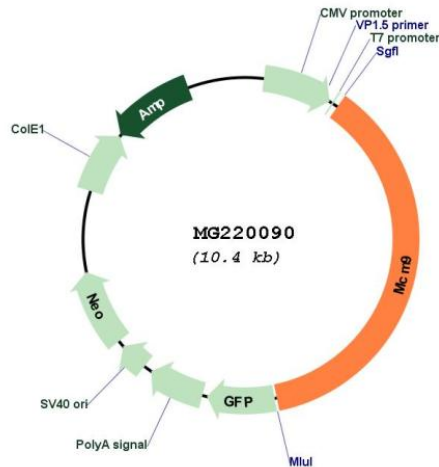
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_027830

**ORF Size:** 3870 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\\_027830.2](#), [NP\\_082106.2](#)

**RefSeq Size:** 3873 bp

**RefSeq ORF:** 3873 bp

**Locus ID:** 71567

**UniProt ID:** [Q2KHI9](#)

**Cytogenetics:** 10 B3

**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) (PubMed:23401855, PubMed:22771120). Required for DNA resection by the MRE11-RAD50-NBN/NBS1 (MRN) complex at double-stranded DNA breaks to generate ssDNA by recruiting the MRN complex to the repair site and by promoting the complex nuclease activity (By similarity). 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 (PubMed:22771120, PubMed:23401855). Acts as a helicase in DNA mismatch repair (MMR) following DNA replication errors to unwind the mismatch containing DNA strand (PubMed:22771120, PubMed:26300262). In addition, recruits MLH1, a component of the MMR complex, to chromatin (By similarity). The MCM8-MCM9 complex is dispensable for DNA replication and S phase progression (PubMed:21987787). Probably by regulating HR, plays a key role during gametogenesis (PubMed:21987787, PubMed:22771120). [UniProtKB/Swiss-Prot Function]