

## Product datasheet for **MG227041**

### **Mki67 (NM\_001081117) Mouse Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mki67 (NM_001081117) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mki67
Synonyms:	D630048A14Rik; Ki-67; Ki67
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG227041 representing NM_001081117, <b>codon optimized</b> . <b>Due to the complexity of NM_001081117, the ORF clone is codon optimized for mammalian Expression.</b> <b>The nucleotide sequence differs from the reference sequence, yet the amino acid sequence remains identical.</b>

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG227041 representing NM\_001081117  
 Red=Cloning site Green=Tags(s)

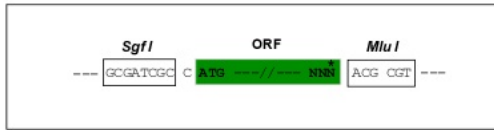
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Kozac  
Consensus

EcoR I      BamH I Kpn I      RBS      Sgf I      Asc I

CTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGATCGCCGGCGCCAGATCT

Hind III      Nhe I      Rsr II      Mlu I      Not I      Xho I      GFP Tag

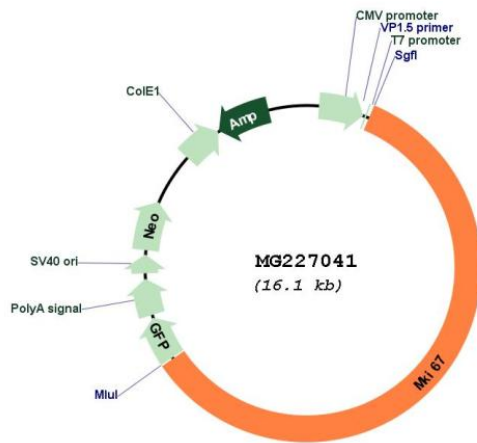
CAAGCTTAACTAGCTAGCGGACCG    ACG CGT    ACG CGG    CCG CTC GAG    ATG GAG AGC GAC    - - - - -

T   R   T   R   P   L   E   M   E   S   D   -   -   -

Pme I      Fse I

--- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT

- - - E E R V Stop

**Plasmid Map:**


**ACCN:** NM\_001081117

**ORF Size:** 9531 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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_001081117.2</a></u> , <u><a href="#">NP_001074586.2</a></u>
<b>RefSeq Size:</b>	10098 bp
<b>RefSeq ORF:</b>	9534 bp
<b>Locus ID:</b>	17345
<b>UniProt ID:</b>	<u><a href="#">E9PVX6</a></u>
<b>Cytogenetics:</b>	7 F3
<b>Gene Summary:</b>	Required to maintain individual mitotic chromosomes dispersed in the cytoplasm following nuclear envelope disassembly (PubMed:27362226). Associates with the surface of the mitotic chromosome, the perichromosomal layer, and covers a substantial fraction of the chromosome surface (PubMed:27362226). Prevents chromosomes from collapsing into a single chromatin mass by forming a steric and electrostatic charge barrier: the protein has a high net electrical charge and acts as a surfactant, dispersing chromosomes and enabling independent chromosome motility (PubMed:27362226). Binds DNA, with a preference for supercoiled DNA and AT-rich DNA (By similarity). Does not contribute to the internal structure of mitotic chromosomes (PubMed:26949251). May play a role in chromatin organization (PubMed:26949251). It is however unclear whether it plays a direct role in chromatin organization or whether it is an indirect consequence of its function in maintaining mitotic chromosomes dispersed.[UniProtKB/Swiss-Prot Function]