

Product datasheet for **MR215461**

Mark4 (NM_172279) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mark4 (NM_172279) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mark4
Synonyms:	2410090P21Rik; C79806; Mark11
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR215461 representing NM_172279
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCTTCGAGGACGGCGCTGGCCCCGGGCAACGATCGAAACTCGGACACGCATGGCACATTGGGCAGTG
 GACGATCTTCGGACAAAGGGCCGTCCTGGTCCAGCCGTTCCCTGGGTGCCGTTGCCGAACTCTATCGC
 TTCTGCCTGAGGAACAACCCATGTGGGCAACTATAGGCTGCTAAGGACCATCGGGAAGGGCAACTTC
 GCCAAAGTCAAGCTGGCTCGGCATATCCTCACGGGCCGGGAGGTCGCTATTAAGATCATTGATAAGACCC
 AGCTGAACCCAGTAGCTTGAGAAAGCTGTTGAGAGAAGTCCGAATTATGAAGGGACTCAACACCCCAA
 CATCGTGAAGCTTTTGGAGTGATAGAGACGGAGAAGACGCTATACCTGGTGATGGAATACGCTAGCGCA
 GGAGAAGTGTGGTACTACCTCGTGTGCGACGGCCGCATGAAGGAGAAGGAGGCTCGAGCCAAGTCCGGC
 AGATCGTGTGACCCGTGCACTACTGTATCAGAAGAACATTGTACACAGGGATCTAAAGGCTGAAAACCT
 GTTGCTGGATGCCGAGGCCAACATCAAAATCGCCGACTTCGGCTTCAGCAATGAGTTCACGCTGGGCTCC
 AAGCTGGACACCTTCTGTGGGAGCCCCATACGCCGCCAGAGCTGTTCCAGGGAAGAAGTATGATG
 GGCCAGAGGTGGACATCTGGAGCCTGGGTGTCATCCTGTACACGCTGGTACGCGGCTCCCTGCCCTTCGA
 TGGGCACAACCTCAAGGAGCTGCGGGAGCGAGTCTCAGAGGAAAGTACCGGGTCCCTTCTACATGTCT
 ACAGACTGCGAGAGCATTCTGCGGAGATTTCTGGTGCTGAACCCCGAAAACGCTGTACTCTGGAGCAAA
 TCATGAAAGACAAATGGATCAACATCGGCTATGAGGGTGAAGGAGTGAAGCCATACACGGAGCCTGAGGA
 GGACTTCGGGGACACCAAGAGAATTGAGGTGATGGTGGGTATGGGCTACACACGGGAAGAATCAAAGAG
 GCCTTGACCAACCAGAAGTACAACGAGGTGACCGCCACCTACCTCCTGCTGGGCAGGAAGACTGAGGAGG
 GTGGGGACCGGGTGCCTCAGGGCTGGCCCTGGCACGGGTGCGGGCGCCAGCGACACCAACACGGGAC
 AAGCTCCAGCAAAGGCAGCAGCCACAACAAGGGCAACGGGCTTCTCCTCCACCTACCACCGCCAGCGC
 CGTCACAGTGACTTCTGTGGCCCGTCCCTGCCCGCTGCACCCGAAGCGCAGCCCAACAGCACGGGAG
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 CGGAAGGACAGCACTAGCACCCCTAACAACTCCCCCAGCATGATGACCCGAAGAAACACCTATGTGT
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 GCGGGTGCCTCGCTCGCTTCCAGTCATAGCCTGGCTCCCCGTGAGCGGAGCGGAGCCGCCTGGCT
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 GCGGCCTCGCCCCACCACCAACCTTCCAAAGCTGACCTCAAACCTGACCCGAAGGGTACAGAGCGAA
 CCTGAGAGAATCGGGGGACCTGAGGTACAAGTTGCCATCTACCTGGGATAAAACGAAACCGCCCCCA
 GGCTGCTCCGATCCCCTGGAGTGTGAAGCTGACCAGCTCGCGACCTCCTGAGGCCCTGATGGTGCCCT
 GCGACAGGCCACAGCGGCCGCCGCTGCCGGTGGCCGACGCCGACCGTTCTGCTGGCCTGCCTGCAC
 GGGGTGCGGGCGGGCCGAGCCCTGTCCATTTGAAAGTGGAGGTGTGCCAGCTGCCCGGCCCGGCC
 TCAGGGGCGTCTTCCGCGGTGTGGCGGGCACCGCCCTGGCCTCCGCACCTCGTACCCGCATCTC
 CAACGACCTCGAACTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR215461 representing NM_172279
 Red=Cloning site Green=Tags(s)

MSSRTALAPGNDRNSDTHGTLGSGRSSDKGPSWSSRSLGARCNSIASCPEEQPHVGNRYLLRTIGKGNF
 AKVKLARHILTGREVAIKIIDKTLQNPSSLQKLFREVRIMKGLNHPNIVKLFVETIEKTLYLVMYASA
 GEVFDYLVSHGRMKEKEARAKFRQIVSAVHYCHQKNIIVHRDLKAENLLDAEANIKIADFGFSNEFTLGS
 KLDTFCGSPPYAAPELFGKKYDGPVDIWSLGVILYTLVSGSLPFDGHNKELRERVLRGKYRVPFYMS
 TDCE SILRRFLVLPNPAKRCTLEQIMKDKWINIGYEGEELKPYTEPEEDFGDTKRIEVMVGMGYTREEIKE
 ALTNQKYNEVTATYLLLGRKTEEGDRGAPGLALARVRAPSDTTNGTSSSKGSSHNKGQRASSSTYHRQR
 RHSDFCGSPAPLHPKRSPTSTGDTELKEERPGRKASC SAVGSGRGLPPSSPMVSSAHNPNAEIPER
 RKDSTSTPNLPPSMMTRRNTYVCTERPGSERPSLLPNGKENS SGT SRVPPASPSHSLAPSGERSRLA
 RGSTIRSTFHGGQVDRDRAGSGSGGVQNGPPASPTLAHEAAPLPSGRPRPTNLFKLT SKL TRRVTE
 PERIGGPEVTSCHLPWDKTETAPRLLRFPWSVKLTSSRPPEALMAALRQATAAARCRQPFPFLACLH
 GGAGGPEPLSHFEVEVCQLPRPGLRGLVFRVAGTALAFRTLVTIRISNDLEL

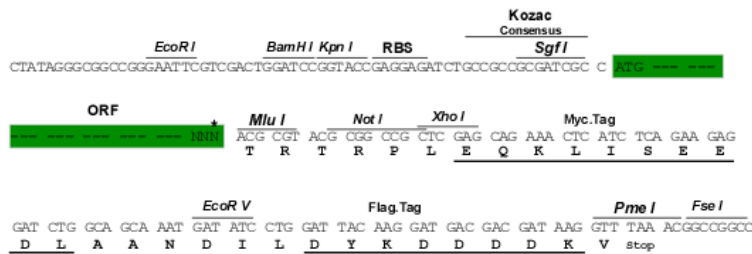
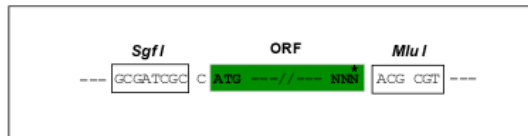
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9009_f11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_172279

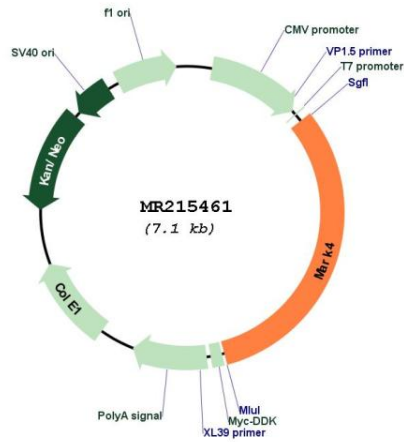
ORF Size: 2256 bp

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:	<ol style="list-style-type: none">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_172279.2
RefSeq Size:	2259 bp
RefSeq ORF:	2259 bp
Locus ID:	232944
UniProt ID:	Q8CIP4
Cytogenetics:	7 A3
MW:	83.1 kDa
Gene Summary:	Serine/threonine-protein kinase (By similarity). Phosphorylates the microtubule-associated protein MAPT/TAU (By similarity). Also phosphorylates the microtubule-associated proteins MAP2 and MAP4 (By similarity). Involved in regulation of the microtubule network, causing reorganization of microtubules into bundles (By similarity). Required for the initiation of axoneme extension during cilium assembly (By similarity). Regulates the centrosomal location of ODF2 and phosphorylates ODF2 in vitro (By similarity). Plays a role in cell cycle progression, specifically in the G1/S checkpoint (By similarity). Reduces neuronal cell survival (By similarity). Plays a role in energy homeostasis by regulating satiety and metabolic rate (PubMed:22992738). Promotes adipogenesis by activating JNK1 and inhibiting the p38MAPK pathway, and triggers apoptosis by activating the JNK1 pathway (PubMed:24989893). Phosphorylates mTORC1 complex member RPTOR and acts as a negative regulator of the mTORC1 complex, probably due to disruption of the interaction between phosphorylated RPTOR and the RRAGA/RRAGC heterodimer which is required for mTORC1 activation (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR215461