

Product datasheet for **MG227406**

Mkl1 (NM_153049) Mouse Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Mkl1 (NM_153049) Mouse Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | Mkl1 |
| Synonyms: | AMKL; Bsac; Mal; Mrtf-A |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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ORF Nucleotide Sequence:

>MG227406 representing NM_153049
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACTCTGCTGGAGCCTGAGATGCTAATGATGGCTGTGCAGTCACTGCTGCAGTTGAAGCTCCAGCAGC
 GCGGACCCGGGAGGAACTGGTGAAGCAAGGGATCATGCCGCTTTGAAAAGCCCCGCTGCATTTTCATGA
 GCAGAGAAGAAGCCTGGAGCGGGCCAGGACCGAGGACTATTTGAAACGGAAGATCCGTTCCCGGCCCGAG
 AGAGCAGAGCTGGTCAGGATGCACATTCTGGAAGAGACCTCGGCTGAGCCTTCGCTCCAGGCCAAGCAGC
 TGAAGCTGAAGAGAGCCAGGCTGGCTGATGACCTCAATGAAAAGATTGCACAGAGGCTGGCCCCATGGA
 GCTGGTGGAGAAGAATATCCTGCCTGTGGAGTCCAGCCTGAAGGAGGCTATCATTGTGGGCCAGGTAAT
 TACCCAAAGGTAGCAGACAGTTCCTCCTCGACGAGGACAGCAGCGATGCCCTGTCTCCTGAGCAGCCTG
 CCAGCCATGAGTCCAGGGTTCAGTGCCATCACCTTGGAGTCCCGAGTCACTGATCCACTGCCAGTGC
 CACCTCCATATCACCCACTCAGGTTCTTTCTCACTCCCAATGGCTCCGGATCCTGGAGAGACGCTTTTT
 CTGGCAGAGCAGCCTCCTCTGCCTCCCGCACTCTGCTGCCCCCAAGCCTAGCCAATGGAAGCATCGTCC
 CCACTGCCAAGCCTGCTCCACACTCATCAAGCAAAGCCAACCCAAGTCTGCCAGCGAGAATCACAGCG
 CAGCAAGAAGGCCAAGGAGCTGAAGCAAAGGTGAAGAAGCTCAAGTACCACCAGTACATCCCCCGGAC
 CAGAAGCAGGACAAGGGGGCGCCCGCATGGACTCCTCCTATGCCAAGATCCTGCAGCAGCAGCAGCTCT
 TCCTGCAGCTGCAGATCCTCAACCAGCAGCAGCAGCAGCAGCAGCAACAGCACTACAACCTACCAGGCCAT
 CCTGCCTGCCCTCCCAAGCCCTCGGCTGAGACTCCTGGAAGCAGTGGCCCTACCCATCACGCAGCCTC
 TCCACCAAGTACGAGCCAGCTCAGGCACCCAGGGCCAGCGGGCTGGCAGCCAGCCAGCCAGCCAGCC
 TAGCTGCCAAACCAGGAGCCCTGCCAGCAACCTGGATGACATGAAGGTGGCAGAGCTGAAGCAAGAAT
 GAAGTTGCGGTCCCTTCCCGTCTCAGGCACCAAGACAGAGCTGATAGAACGCTGCGTGCCTACCAAGAC
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 TTGGTGAATGGTACATCGCCGCTGACACAGCTCACCTGCAGGCCTCCCACTGCAGATCGTGAAGGA
 GGAGGGTGGCCGTGCTGCTGCTGTCTAAGCCCTGGTGTGCGGGCTGAGCTGGAGGGACTGGACAAG
 GACCAGATGCTGCAGGAGAAGGACAAGCAGATTGAGGAGCTGACCCGAATGCTCCAACAGAAGCAGCAGC
 TGGTTGAGCTGCTGCGGCTACAGCTGGAGCAGCAGAAGCGGGCCAGCAGCCAGCCAGCCAGCAGCC
 TGTGAAGAGGAAAGTGGTTTCTCCAGTTGCCAGCTGAGCTGCCAGCCCAAGGGCTCTGCCCATGCTTTT
 GGCTCTGGCCTAGTGGTCCCACTACCAACCATGGAGACTCAGGCCCCAGCGCCAGAGTCCCCACCTG
 TGGTGGTGAAGCAGGAAGCTGGGCCACCTGAGCCAGATCTGGCCCCAGCTCCAGCTGCTTTGGGCTC
 CCAGGGCACCAGCTTCTCAAGAGGGTCAAGCCCTCCTACCCTGGTCACTGACTCTACAGGGACTCACCTC
 ATCCTCACTGTGACCAATAAGAGTGTGATGGCCCTGGCTGCCTGCAGGGAGCCCCAGCAGCCCTTGT
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 TGGGCTCCATTGACACCACAACCTCGCCTTTGAGTGAACCTCCCAAGCTGCTCCTCCACCAGTTCC
 CCCACCTCCAGGGCGCCTTGAAGACTTCTGGAGAGCAGCACAGGGCTGCCCTGCTGACAAGTGGGC
 ACGAGGGACCAGAACCCCTTCCCTCATTGATGACCTCCACAGCCAGATGCTGAGCAGCTCCGCCATCCT
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 CTGGACCTGGCTGTTGGCCACCTGGACAGCATGGACTGGCTGGAGCTGTCGTCTGGTGGCCCTGTGCTCA
 GCCTGGCTCCCTCAGCACTGCAGCCCAAGCCTCTTCTCGATGGACTTCTGGATGGACACGACTTGCA
 GCTCCACTGGGATTCCTGCTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG227406 representing NM_153049
 Red=Cloning site Green=Tags(s)

MTLLEPEMLMMAVQSVLQLKLQQRRTREELVSQGI MPPLKSPA AFHEQRRSLERARTEDYLKRKIRSRPE
 RAELVRMHILEETSAEPSLQAKQLKLRARLADDLNEKIAQRPGPMELVEKNILPVESLKEAIIIVGQVN
 YPKVADSSSFDESSDAL SPEQPASHESQGSVSPLESRVSDPLPSATSI SPTQVLSQLPMAPDPGETLF
 LAEQPPLPPAPLLPPSLANGSIVPTAKPAPTLIKQSQPKSASEKSQRSKKAKELKPKVKLKYHQYIPPD
 QKQDKGAPAMDSSYAKILQQQLFLQLQILNQQQQQQOHYNYQA ILPAPPKPSAETPGSSAPTPSRSL
 STSSSPSSGTPGPSGLARQSSTALAAKPGALPANLDDMKVAELKQELKLRSLPVS GTKTELIERLAYQD
 QVSPAPGAPKAPATTSVLSKAGEVVVAFPAALLSTGSALV TAGLAPAEMVVATVTSNGMVKFGSTGSTPP
 VSPTPERSLLSTGDENSTPGDAFGEMVTSPLTQLTLQASPLQIVKEEGARAASCCLSPGARAEGLDK
 DQMLQEKDKQIEELTRMLQQKQLVELLRLQLEQQKRAQQPAPASSPVKRESGFSSCQLSCQPQGS AHAF
 GSSLVVP TTNHGDTQAPAPESPVVVKQEAGPPEPDLAPSSQLLLGSQGT SFLKRVSPPTLVTDSTGTHL
 ILTVTNKSADG PGLPAGSPQQPLSQPGSPAGPPAQMDLEHPPQPPFATPT SLLKKEPPGYEETVTQPK
 QQENGSSSQHMDDLFDILIQSGEISADFKEPSP L PGKEKSPAAAAYGPPLTPQPSPL SELPQAAPPPGS
 PTLPGRL EDFLESSTGLPLL TSGHEGPEPLSLIDDLHSQMLSSSAILDHPPSPMDTSELHF APEPSSGMG
 LD LAVGHLDSMDWLELSSGGPVLSLAPLSTAAPSLF SMDFLDGHDLQLHWD SCL

TRTRPLE - GFP Tag - V

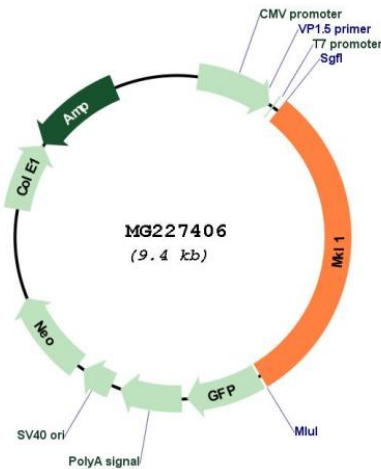
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_153049

ORF Size: 2892 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_153049.3](#), [NP_694629.2](#)

RefSeq Size: 4111 bp

RefSeq ORF: 2895 bp

Locus ID: 223701

UniProt ID: [Q8K4J6](#)

Cytogenetics: 15 E1

Gene Summary: Transcription coactivator that associates with the serum response factor (SRF) transcription factor to control expression of genes regulating the cytoskeleton during development, morphogenesis and cell migration (PubMed:12019265, PubMed:12732141, PubMed:17588931, PubMed:19350017, PubMed:24732378). The SRF-MRTFA complex activity responds to Rho GTPase-induced changes in cellular globular actin (G-actin) concentration, thereby coupling cytoskeletal gene expression to cytoskeletal dynamics (PubMed:24732378). MRTFA binds G-actin via its RPEL repeats, regulating activity of the MRTFA-SRF complex (PubMed:12732141, PubMed:17588931). Activity is also regulated by filamentous actin (F-actin) in the nucleus (PubMed:23558171, PubMed:25759381).[UniProtKB/Swiss-Prot Function]