

Product datasheet for **MR230204**

Mtf2 (NM_001253879) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mtf2 (NM_001253879) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mtf2
Synonyms:	9230112N11Rik; AA537621; C76717; M96; Pcl2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR230204 representing NM_001253879
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGTCTGTACAATATGTCAAGAAGAGTATTCAGAAGCTCCCAATGAAATGGTTATATGTGATAAGTGTG
 GTCAAGGATATCATCAGCTGTGTACACACCTCATATTGACTCGAGTGTGATTGATTAGATGAAAAGTG
 GCTTTGTGCGACAGTGCCTTTTGAACAACACAAAGAGGGGTGGTGCCTTAAGAAAGGACCAATGCC
 AAAGCATTGCAAGTCATGAAGCAGACATTACCCTATAGTGTGGCTGACCTTGAATGGGATGCAGGCCATA
 AAACCAATGTCCAGCAGTGTACTGCTATTGTGGAGGCCCTGGAGACTGGTATTTAAAGATGCTGCAGTG
 CTGCAATGTAAGCAGTGGTTTCATGAAGCTTGTGTCCAATGCCTTCAGAAGCCAATGCTGTTTGGAGAT
 AGGTTTTATACATTTATTTGCTCTGTCTGCAGTCTGGACCAGAATACCTCAAACGCTACCGTTACAGT
 GGGTAGATATAGCACACCTATGCCTTTACAACCTAAGTGTATTACAAGAAGAAATACTTTGATTCTGA
 ACTTGAGCTTATGACATACATTAATGAAAACCTGGGATAGATTGCACCCTGGAGAGCTGGCAGACACACC
 AAATCTGAAAGATATGAGCATGTTCTGGAGGCATTAATGATTACAAGACCATGTTTATGCTGGGAAAG
 AAATAAAGAAGAAGAAGCATTGTTTGGGTTGCGAATTCGTGTTCTCTCTGTGCCACCAATGTGGCTTT
 CAAAGCAGAGAAAGAACCAGAAGGAACATCCCATGAATTTAAATTAAGGCAGAAAGGCATCCAAACCT
 ACATCTGACTCAAGGGAAGTAAGCAATGGGATAGAAAAAAGGAAAGAAAAAATCTGTAGGTCGTCCTC
 CTGGCCCATATACAAGAAAAATGATTCAAAAACTGCTGAGCTACCTTTGGATAAGGAATCAGTTTCAGA
 GAATCTACGTTGGATTTACCTTGTTCTATAGGGAGAAGTGGGAAATGCACATTCATCCAATACCTCA
 GATGTGGACCTCACGGGTGCTTCCAGTGCACAGAACTACCTCGGCTAGCATTTCAGGCATTGTGGAT
 TATCAGACTCTAGAAAAAGAAGTGCACAGGAAGATCATGGCCTGCTGCAATACCAATTCGCGGGAAG
 AAGAGGTCGCCTTCCACGAAGAGCACTCCAGACTCAGAAGTGTGAAAGATGATGAAGGCAAA
 GAAGATTACAGTTTGAAGAAGTAAACACAGAAATCTGAATAACTTAGCAGATCAGGAGTTGCAGCTCA
 ATCACCTGAAAAACTCCATCACTAGTTATTTTGGTGCCGCAGGTAGAATAGCATGTGGCGAAAAATACAG
 AGTTTTGGCTCGTGGGTGACGCTTGTGGGAAGTGCAGTATCTTGTGGAATGGGAAGGAGCGACTGCA
 TCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR230204 representing NM_001253879
 Red=Cloning site Green=Tags(s)

MVCTICQEEYSEAPNEMVICDKCGQYHQLCHTPHIDSSVIDSDEKWLCRQCVFATTTKRGGALKKGPNA
 KALQVMKQTLPYSVADLEWDAGHKTNVQQCYCYCGPGDWYKMLQCCKQKQWFHEACVQCLQKPMFLGD
 RFYTFICSVSSGPEYLKRLPLQWVDIAHLCLYNLSVIHKKKYFDSELELMTYINENWDRLLHPGELADTP
 KSERYEHVLEALNDYKTMFMSGKEIKKKKHLFGLRIRVPPVPPNVAFAEKEPEGTSHEFKIKGRKASKP
 TSDSREVSNGIEKKGKKKSVGRPPGPYTRKMIQKTAELPLDKESVSENPTLDLPCSIGRTEGIAHSSNTS
 DVDLTGASSANETTASISRHCLSDSRKRTGRSWPAIPLHRRRRGRLLPRRALQTQNSEVVKDEGK
 EDYQFEELNTEILNNLADQELQLNHLKNSITSYFGAAGRIACGEKYRVLARRVTLDGKQYQLVEWEGATA
 S

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

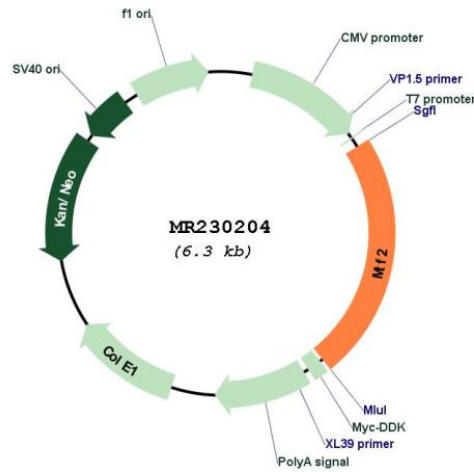
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_001253879

ORF Size: 1473 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:	<u>NM_001253879.1, NP_001240808.1</u>
RefSeq Size:	4347 bp
RefSeq ORF:	1476 bp
Locus ID:	17765
UniProt ID:	<u>Q02395</u>
Cytogenetics:	5 F
MW:	56 kDa
Gene Summary:	<p>Polycomb group (PcG) that specifically binds histone H3 trimethylated at 'Lys-36' (H3K36me3) and recruits the PRC2 complex. Acts by binding to H3K36me3, a mark for transcriptional activation, and recruiting the PRC2 complex, leading to enhance PRC2 H3K27me3 methylation activity. Regulates the transcriptional networks during embryonic stem cell self-renewal and differentiation. Promotes recruitment of the PRC2 complex to the inactive X chromosome in differentiating XX ES cells and PRC2 recruitment to target genes in undifferentiated ES cells. Required to repress Hox genes by enhancing H3K27me3 methylation of the PRC2 complex. In some conditions may act as an inhibitor of PRC2 activity: able to activate the CDKN2A gene and promote cellular senescence by suppressing the catalytic activity of the PRC2 complex locally. Binds to the metal-regulating-element (MRE) of MT1A gene promoter.</p> <p>[UniProtKB/Swiss-Prot Function]</p>