

Product datasheet for **RG228946**

MTF2 (NM_001164392) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MTF2 (NM_001164392) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MTF2
Synonyms:	dj976O13.2; M96; PCL2; TDRD19A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG228946 representing NM_001164392
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAGAGACTCTACAGGGCAGGTAATTCCTGGTCCACAAGCGGTCTCCTTTACGTCGAAACAAAAGA
 CCCAACATCCTTGACCAAGCTGTCTTTACAGGATGGACATAAAGCCAAAAGCCAGCATGTAAATTTGA
 AGAGGGTCAGGATGTCCTAGCTAGATGGTCAGATGGCTTGTCTTTTATCTTGGCACTATCAAAAAGATAAAC
 ATATTGAAACAGAGCTGCTTCATCATATTTGAAGACAGTTCTAAATCCTGGGTTCTCTGGAAGGACATTC
 AAACAGGAGCCACTGGAAGTGGGAAAATGGTCTGTACAATATGTCAAGAAGAGTATTGAGAAGCTCCCAA
 TGAAATGGTTATATGTGACAAGTGTGGCCAAGGATATCATCAGTTGTGTACACACCTCATATTGATTCC
 AGTGTGATTGATTGAGATGAAAAATGGCTCTGTCCGCGAGTGTGTTTTGCAACAACAACAAAGAGGGGTG
 GTGCACCTAAGAAAGGACCAATGCCAAAGCATTGCAAGTGTGCAAGCAGACATTACCCTATAGTGTGGC
 AGACCTTGAATGGGATGCAGGTGCAAAACCAATGTCCAGCAGTGTACTGCTATTGTGGAGGCCCTGGA
 GACTGGTATTTGAAGATGCTACAGTGTGCAAAATGTAAGCAGTGGTTTCATGAGGCTTGTGTGCAATGCC
 TTCAAAAGCCAATGCTATTTGGAGACAGATTTTATACGTTTATATGCTCTGTCTGCACTTCTGGACCAGA
 ATACCTCAAACGCTACCATACAGTGGGTAGATATAGCACACCTATGCCTTTACAACCTAAGTGTATT
 CATAAGAAGAAATACTTTGATTCTGAACCTGAGCTTATGACATACATTAATGAAAAGTGGGATAGATTGC
 ACCCTGGAGAGCTGGCAGACACACCAAAATCTGAAAGATATGAGCATGTTCTGGAGGCATTAATGATTA
 CAAGACCATGGAAGTAAAGCAATGGCATAGAAAAAAGGAAAGAAAAAATCTGTAGGTCGTCACCTGGC
 CCATATAACAAGAAAAATGATTCAAAAAAGTCTGAGCCACTTTTGGATAAGGAATCAATTCAGAGAATC
 CTACTTTGGATTTACCTGTTCTATAGGGAGAACTGAGGAACTGCACATTCATCCAATACCTCAGATGT
 GGATTTACGGGTGCTTCCAGTGTGCAAAAGAACTACCTCGTCTAGCATTTCAGGCATTATGGATTATCT
 GACTCCAGAAAAAGAACGCTACAGGAAGATCTTGGCCTGCTGCAATACCACATTTGCGGAGAAGAAGAG
 GTCGTCTTCCAAGAAGAGCACTCCAGACTCAGAACTCAGAAATTGTAAGATGATGAAGGCAAAGAAGA
 TTATCAGTTTGTGAACCAACAGAGATTCTGAATACTTAGCAGATCAGGAGTTACAACCTCAATCAT
 CTAAGAAGTCCATTACCAGTTATTTGGTGTGCAGGTAGAATAGCATGTGGCGAAAAATACCGAGTTT
 TGGCAGTCCGGTGACACTTGTGAAAGGTGCAGTATCTGTGGAATGGGAAGGAGCAACTGCATCC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG228946 representing NM_001164392
 Red=Cloning site Green=Tags(s)

MRDSTGAGNSLVHKRSPLRRNQKTPTSLTKLSLQDGHKAKKPACKFEEGQDVLARWSDGLFYLGTIKKIN
 ILKQSCFIIFEDSSKSWLWKDIQTGATGSGEMVCTICQEEYSEAPNEMVICDKCGQYHQLCHTPHIDS
 SVIDSDEKWLCRQCVFATTTKRGALKKGPNAKALQVMKQTLPSYVADLEWDAGHKTINVQCQCYCGGPG
 DWYLMKLCQCKKQWFHEACVQCLQKPMFLGDRFYTFICSVCSGPEYLRPLQWVDIAHLCLYNLSVI
 HKKKYFDSELELMTYINENWDRLHPGELADTPKSERYEHVLEALNDYKTMVSNIEKKGKKKSVGRPPG
 PYTRKMIQKTAEPPLDKESISENPTLDLPCSIGRTEGTAHSSNTSDVDFTGASSAKETTSSISRHYGLS
 DSRKRTRTGRSWPAAIPLRRRRRRLPRRALQTQNSEIVKDDEGKEDYQFDELNTEILNNLADQELQLNH
 LKNSITSYFGAAGRIACGEKYRVLARRVTLDGKVQYLVEWEGATAS

SGP**TRRRLE** - GFP Tag - V

Restriction Sites:

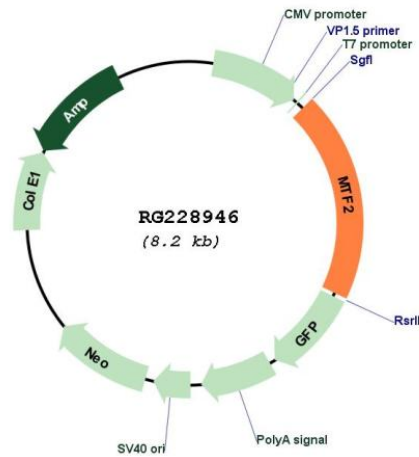
Sgfl-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN:	NM_001164392
ORF Size:	1608 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_001164392.1 , NP_001157864.1
RefSeq Size:	3973 bp
RefSeq ORF:	1611 bp
Locus ID:	22823
UniProt ID:	Q9Y483
Cytogenetics:	1p22.1
Protein Families:	Druggable Genome, Transcription Factors
Gene Summary:	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 (By similarity). [UniProtKB/Swiss-Prot Function]