

Product datasheet for **MG209240**

Mtf2 (NM_013827) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mtf2 (NM_013827) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Mtf2
Synonyms:	9230112N11Rik; AA537621; C76717; M96; Pcl2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG209240 representing NM_013827
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGAGAGACTCTACAGGAGCAGTAATTCCTGGTCCACAAGCGGTCTCCTTTACGTCGAAACAAAAGA
 CCTCAGCATCCTTGAACAAGCTGTCTTTACAGGATGGACATAAAGCCAAAAAACCAGCATGTAAATTTGA
 AGAGGGTCAAGATGTCTTAGCTAGATGGTCAGATGGCTTGTCTTTTATCTTGAACTATCAAAAAGATAAAC
 ATATTGAAACAGAGCTGCTTCATCATATTTGAGGACAGTTCAAAATCCTGGGTTCTCTGGAAGGACATCC
 AAACAGGAGCCACTGGGAGTGGGAAAATGGTCTGTACAATATGTCAAGAAGAGTATTGAGAAGCTCCCAA
 TGAAATGGTTATATGTGATAAGTGTGGTCAAGGATATCATCAGCTGTGTACACACCTCATATTGACTCG
 AGTGTGATTGATTGAGATGAAAAGTGGCTTTGTCGACAGTGCCTTTTGAACAACACTACAAAGAGGGGTG
 GTGCGCTTAAGAAAGGACCAAATGCCAAAGCATTGCAAGTATGAAGCAGACATTACCCTATAGTGTGGC
 TGACCTTGAATGGGATGCAGGCCATAAAACCAATGTCCAGCAGTGTACTGCTATTGTGGAGGCCCTGGA
 GACTGGTATTTAAAGATGCTGCAGTGTGCAAAATGAAGCAGTGGTTTCATGAAGCTTGTGTCCAATGCC
 TTCAGAAGCCAATGCTGTTTGGAGATAGGTTTTATACATTTATTTGCTCTGTCTGCACTTCTGGACCAGA
 ATACCTCAAACGCTACCGTTACAGTGGGTAGATATAGCACACCTATGCCTTTACAACCTAAGTGTATT
 CACAAGAAGAAACTTTTATTGCTGAACTTGAAGTATGACATACATTAATGAAAAGTGGGATAGATTGC
 ACCCTGGAGAGCTGGCAGACACACCCAAATCTGAAAGATATGAGCATGTTCTGGAGGCATTAATGATTA
 CAAGACCATGTTTATGTCTGGGAAAGAAATAAAGAAGAAGAAGCATTGTTTGGGTTGCGAATTCGTT
 CCTCTGTGCCACCAAATGTGGCTTTCAAAGCAGAGAAAGAACCCAGAAGGAACATCCCATGAATTTAAAA
 TTAAGGCAGAAAGGCATCCAAACCTACATCTGACTCAAGGGAAGTAAGCAATGGGATGAAAAAAAAGG
 AAAGAAAAAATCTGTAGGTCGCTCCTCGGCCATATACAAGAAAAATGATTCAAAAAACTGCTGAGCTA
 CCTTTGGATAAGGAATCAGTTTTCAGAGAATCCTACGTTGGATTTACCTTGTCTATAGGGAGAAGTGGG
 GAATTGCACATTCATCCAATACCTCAGATGTGGACCTCACGGGTGCTTCCAGTGCAAACGAAACTACCTC
 GGCTAGCATTTCCAGGCATTGTGGATTATCAGACTCTAGAAAAAGAACTCGCACAGGAAGATCATGGCCT
 GCTGCAATACCACATTTGCGGAGAAGAAGAGGTGCGCTTCCACGAAGAGCACTCCAGACTCAGAAGTCA
 AAGTTGTGAAAGATGATGAAGGCAAAGAAGATTATCAGTTTGAAGAACTTAACACAGAAATTTCTGAATA
 CTTAGCAGATCAGGAGTGCAGCTCAATCACCTGAAAACTCCATCACTAGTATTTTGGTGCCGAGGT
 AGAATAGCATGTGGCGAAAAATACAGATTTTGGCTCGTGGGTGACGCTTGATGGGAAGGTGCAGTATC
 TTGTGGAATGGGAAGGAGCGACTGCATCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG209240 representing NM_013827
 Red=Cloning site Green=Tags(s)

MRDSTGAGNSLVHKRSPRRNQKTSASLNKLSLQDGHKAKKPACKFEEGQDVLARWSDGLFYLGTIKKIN
 ILKQSCFIIFEDSSKSWLWKDIQTGATGSGEMVCTICQEEYSEAPNEMVICDKCGQGYHQLCHTPHIDS
 SVIDSDEKWLCRQCVFATTTKRGGALKKGPNAKALQVMKQTLPYSVADLEWDAGHKTNVQQCYCYCGGPG
 DWYLMKLQCKCKQWFHEACVQLQKPMFLGDRFYTFICSVCSGPEYLKRLPLQWVDIAHLCLYNLSVI
 HKKKYFDSELELMTYINENWDRLHPGELADTPKSERYEHVLEALNDYKTMFMSGKEIKKKKHLFGLRIRV
 PPVPPNVAFAKAEKEPEGTSHEFIKGRKASKPTSREVSNGIEKKGKSSVGRPPGPYTRKMIQKTAEL
 PLDKESVSENPTLDLPCSIGRTEGIAHSSNTSDVDLTGASSANETTSASISRHCGLSDSRKRTRTGRSWP
 AAIPHLRRRRGRPRRALQTQNSEVVKDDEGKEDYQFEELNTEILNLDLADQELQLNHLKNSITSYFGAAG
 RIACGEKYRVLARRVTLDGKVQYLVEWEGATAS

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_013827

ORF Size: 1779 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_013827.3](#), [NP_038855.2](#)

RefSeq Size: 4343 bp

RefSeq ORF: 1782 bp

Locus ID: 17765

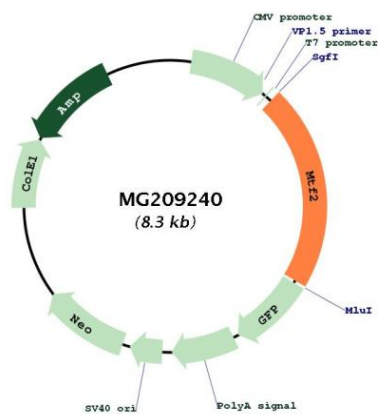
UniProt ID: [Q02395](#)

Cytogenetics: 5 F

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. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG209240