

## Product datasheet for **RC220584**

### MEF2C (NM\_002397) Human Tagged ORF Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                      |
| Product Name:             | MEF2C (NM_002397) Human Tagged ORF Clone |
| Tag:                      | Myc-DDK                                  |
| Symbol:                   | MEF2C                                    |
| Synonyms:                 | C5DELq14.3; DEL5q14.3                    |
| Mammalian Cell Selection: | Neomycin                                 |
| Vector:                   | pCMV6-Entry (PS100001)                   |
| E. coli Selection:        | Kanamycin (25 ug/mL)                     |



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**ORF Nucleotide Sequence:**

>RC220584 representing NM\_002397  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGC**

ATGGGGAGAAAAAGATTACAGATTACGAGATTATGGATGAACGTAAACAGACAGGTGACATTTACAAAGA  
 GGAAATTTGGTTGATGAAGAAGGCTTATGAGCTGAGCGTGCTGTGTGACTGTGAGATTGCGCTGATCAT  
 CTTCAACAGCACCAACAAGCTGTTCCAGTATGCCAGCACCGACATGGACAAAGTCTTCTCAAGTACACG  
 GAGTACAACGAGCCGATGAGAGCCGGACAACTCAGACATCGTGGAGACGTTGAGAAAGAAGGGCCTTA  
 ATGGCTGTGACAGCCAGACCCGATGCGGACGATTCCGTAGGTACAGCCCTGAGTCTGAGGACAAGTA  
 CAGGAAAATTAACGAAGATATTGATCTAATGATCAGCAGGCAAAGATTGTGTGCTGTTCCACCTCCCAAC  
 TTCGAGATGCCAGTCTCCATCCAGTGTCCAGCCACAACAGTTTGGTGTACAGCAACCCTGTCAGCTCAC  
 TGGGAAACCCCAACCTATTGCCACTGGCTACCCCTTCTCTGCAGAGGAATAGTATGTCTCCTGGTGAAC  
 ACATCGACCTCCAAGTGCAGGTAAACAGGTGGTCTGATGGGTGGAGACCTCACGTCTGGTGCAGGCACC  
 AGTGCAGGGAACGGGTATGGCAATCCCCGAAACTCACCAGGTCTGCTGGTCTCACCTGGTAACTGAACA  
 AGAATATGCAAGCAAAATCTCCTCCCCCAATGAATTTAGGAATGAATAACCGTAAACCAGATCTCCGAGT  
 TCTTATTCACACGAGCAGCAAGAATACGATGCCATCAGTGTCTGAGGATGTGACCTGCTTTTGAATCAA  
 AGGATAAATAACTCCAGTCGGCTCAGTCATTGGCTACCCAGTGGTTTCCGTAGCAACTCCTACTTTAC  
 CAGGACAAGGAATGGGAGGATATCCATCAGCCATTTCAACAACATATGGTACCGAGTACTCTCTGAGTAG  
 TGCAGACCTGTATCTCTGTCTGGGTTTAACACCGCCAGCGCTCTTCACCTTGGTTCAGTAACTGGCTGG  
 CAACAGCAACACCTACATAACATGCCACCATCTGCCCTCAGTCAGTTGGGAGCTTGCACTAGCACTCATT  
 TATCTCAGAGTTCAAATCTCTCCTGCCTTCTACTCAAAGCCTCAACATCAAGTCAGAACCTGTTTCTCC  
 TCCTAGAGACCGTACCACACCCCTTCGAGATACCCACAACACACGCGCCACGAGGCGGGGAGATCTCCT  
 GTTGACAGCTTGAGCAGCTGTAGCAGTTCGTACGACGGGAGCGACCGAGAGGATACCCGGAACGAATTCC  
 ACTCCCCATTGGACTACCCAGACCTTCGCCGGACGAAAGGGAAAGTCCCTCAGTCAAGCGCATGCGACT  
 TTCTGAAGGATGGGCAACA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC220584 representing NM\_002397  
 Red=Cloning site Green=Tags(s)

MGRKKIQTITRIMDERNRQVFTTKRKFGLMKKAYELSVLCDCEIALIIFNSTNKLQYASTDMDKVLLKYT  
 EYNPHESRTNSDIVETLRKKGLNGCDSPDPDADDSVGHSPESDKYRKINEDIDLMISQRLCAVPPPN  
 FEMPVSIPIVSSHNSLVSNPVSSLGNPNLLPLAHPSLQRNSMSPGVTHRPPSAGNTGGLMGDLTSGAGT  
 SAGNGYGNPRNSPGLLVSPGNLKNMQAKSPPPMNLGMNNRKPDLRVLIIPGSKNTMPSVEDVDLLLQ  
 RINNSQSAQSLATPVVSVATPTLPQGGMGYPSAISTTYGTEYSLSSADLSSLGFNTASALHLGSVTGW  
 QQQHLHNMPPSALSQLGACTSTHLSQSSNLSLPSTQSLNIKSEPVSPPRDRTTTPSRYPQHRHEAGRSP  
 VDSLSSCSSSYDGSREDHRNEFHSPIGLTRPSDERESPSVKRMRLSEGWAT

**TR**TRPLE**QKL**ISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6271\\_c08.zip](https://cdn.origene.com/chromatograms/mk6271_c08.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_002397

**ORF Size:** 1419 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

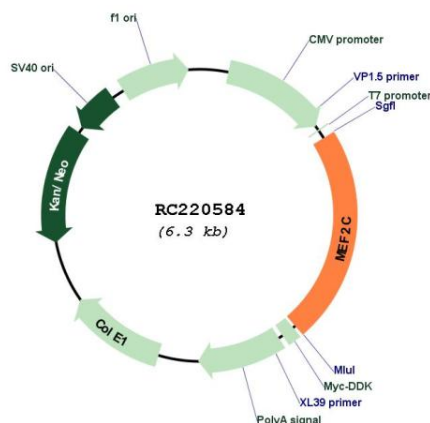
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

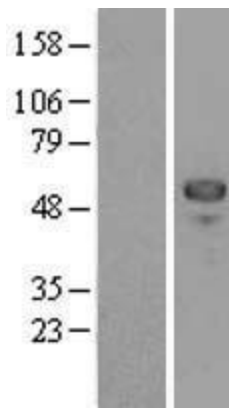
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

|                          |   |
|--------------------------|---|
| <b>Note:</b>             | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.  |
| <b>RefSeq:</b>           | <a href="#">NM_002397.5</a>   |
| <b>RefSeq Size:</b>      | 4077 bp   |
| <b>RefSeq ORF:</b>       | 1422 bp   |
| <b>Locus ID:</b>         | 4208  |
| <b>UniProt ID:</b>       | <a href="#">Q06413</a>  |
| <b>Cytogenetics:</b>     | 5q14.3  |
| <b>Domains:</b>          | MADS  |
| <b>Protein Families:</b> | Transcription Factors   |
| <b>Protein Pathways:</b> | MAPK signaling pathway  |
| <b>MW:</b>               | 51 kDa  |
| <b>Gene Summary:</b>     | This locus encodes a member of the MADS box transcription enhancer factor 2 (MEF2) family of proteins, which play a role in myogenesis. The encoded protein, MEF2 polypeptide C, has both trans-activating and DNA binding activities. This protein may play a role in maintaining the differentiated state of muscle cells. Mutations and deletions at this locus have been associated with severe cognitive disability, stereotypic movements, epilepsy, and cerebral malformation. Alternatively spliced transcript variants have been described. [provided by RefSeq, Jul 2010] |

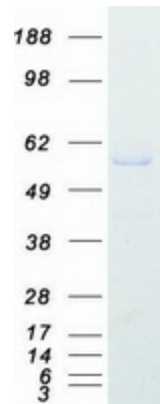
## Product images:



Circular map for RC220584



Western blot validation of overexpression lysate (Cat# [LY419349]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220584 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MEF2C protein (Cat# [TP320584]). The protein was produced from HEK293T cells transfected with MEF2C cDNA clone (Cat# RC220584) using MegaTran 2.0 (Cat# [TT210002]).

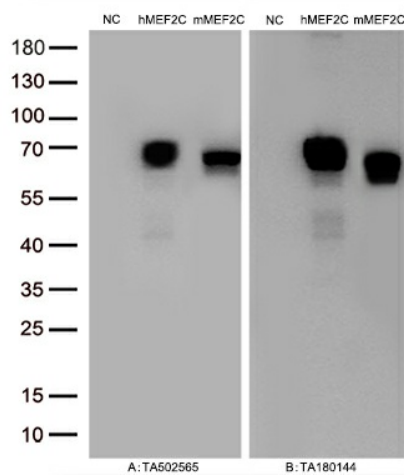
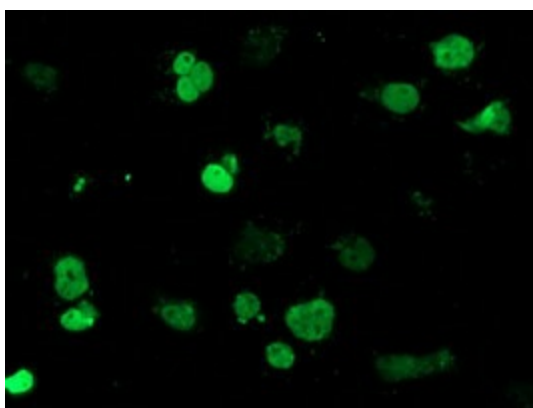
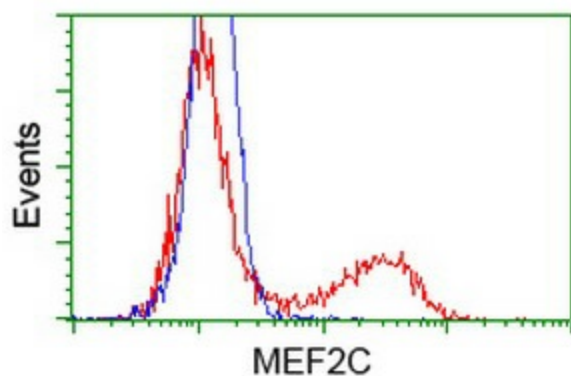


Figure A, Western blot analysis of overexpressed lysates (15ug per lane) from HEK293T cells transfected with empty plasmid ([PS100001], NC), human MEF2C plasmid (RC220584, hMEF2C), mouse MEF2C plasmid ([MR226865], mMEF2C) using anti-MEF2C antibody [TA502565] (1:5000@1mg/ml). Figure B, Western blot analysis of the same samples as figure A with anti-DDK antibody ([TA180144], 1:10000@1mg/ml).



Anti-MEF2C mouse monoclonal antibody ([TA502565]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY MEF2C (RC220584 ).



HEK293T cells transfected with either RC220584 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-MEF2C antibody ([TA502565]), and then analyzed by flow cytometry.