

## Product datasheet for RC203112

### Actin (ACTA1) (NM\_001100) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Actin (ACTA1) (NM_001100) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Actin
Synonyms:	ACTA; ASMA; CFTD; CFTD1; CFTDM; MPFD; NEM1; NEM2; NEM3; SHPM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203112 representing NM_001100 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGCGACGAAGACGAGACCACCGCCCTCGTGTGCGACAATGGCTCCGGCCTGGTAAAAGCCGGCTTCG  
CCGGGGATGACGCCCTAGGGCCGTGTTCCCGTCCATCGTGGGCCGCCCGACACCAGGGCGTCATGGT  
CGGTATGGGTGAGAAAGATTCTACGTGGGCGACGAGGCTCAGAGCAAGAGAGGTATCCTGACCCTGAAG  
TACCCTATCGAGCACGGCATCATCACTACTGGGATGACATGGAGAAGATCTGGCACCACACCTTCTACA  
ACGAGCTTCGCGTGGCTCCCGAGGAGCACCCACCTGCTCACCGAGGCCCCCTCAATCCCAAGGCCAA  
CCGCGAGAAGATGACCCAGATCATGTTTGAGACCTTCAACGTGCCGCCATGTACGTGGCCATCCAGGCC  
GTGCTGTCCCTCTACGCCTCCGGCAGGACCACCGCATCGTGTGGACTCCGGCGACGGCGTCAACCACA  
ACGTGCCCATTTATGAGGGCTACGCGCTGCCGACGCCATCATGCGCTGGACCTGGCGGGCCGCGATCT  
CACCGACTACCTGATGAAGATCCTCACTGAGCGTGGTACTCCTTCGTGACCACAGCTGAGCGCGAGATC  
GTGCGCGACATCAAGGAGAAGCTGTGCTACGTGGCCCTGGACTTCGAGAACGAGATGGCGACGGCCGCT  
CCTCCTCCTCCCTGAAAAGAGCTACGAGCTGCCAGACGGGCAGGTCATACCATCGGCAACGAGCGCTT  
CCGCTGCCCGGAGACGCTTCCAGCCCTCCTTCATCGGTATGGAGTCGGCGGGCATTACGAGACCACC  
TACAACGACATCATGAAGTGTGACATCGACATCAGGAAGGACCTGTATGCCAACAACGTCATGTCCGGGG  
GCACCAGATGTACCCTGGGATCGCTGACCGCATGCAGAAAGAGATCACCGCGCTGGCACCCAGCACCAT  
GAAGATCAAGATCATCGCCCCGCGGAGCGCAAATACTCGGTGTGGATCGCGGGCTCCATCCTGGCCTCG  
CTGTCCACCTTCCAGCAGATGTGGATCACCAAGCAGGAGTACGACGAGGCCGGCCCTTCCATCGTCCACC  
GCAATGCTTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC203112 representing NM\_001100  
Red=Cloning site Green=Tags(s)

MCDEETALVCDNGSGLVKAGFAGDDAPRAVFPISVGRPRHQVVMGMGQKDSYVGDEAQS~~SRG~~ILTLK  
 YPIEHGIITNWDMEKIWHHTFYNELRVAP~~EEH~~PTLLTEAPLNPKANREKMTQIMFETFNVPAMYVAIQ  
 VLSLYASGR~~TTG~~IVLDSGDGVTHNVPIYEGYALPHAIMRLDLAGRDLTDYLMKILTERGYSFVTTAEREI  
 VRDIKEKLCYVALDFENEMATAASSSSLEKSYELPDGQVITIGNERFRCPETLFQPSFIGMESAGIHETT  
 YNSIMKCDIDIRKDLYANNVMSGTTMYPGIADRMQKEITALAPSTMKIKIIAPPERKYSVWIGGSILAS  
 LSTFQMMWITKQEYDEAGPSIVHRKCF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8112\\_e10.zip](https://cdn.origene.com/chromatograms/mk8112_e10.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001100

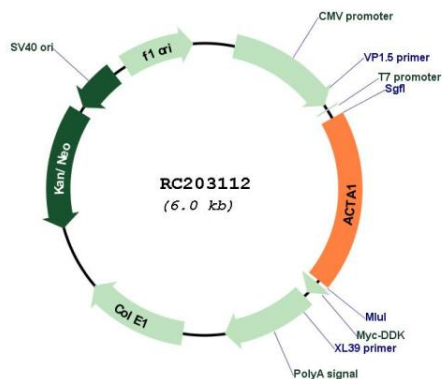
**ORF Size:** 1131 bp

**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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001100.4</a>
<b>RefSeq Size:</b>	1509 bp
<b>RefSeq ORF:</b>	1134 bp
<b>Locus ID:</b>	58
<b>UniProt ID:</b>	<a href="#">P68133</a>
<b>Cytogenetics:</b>	1q42.13
<b>Domains:</b>	ACTIN
<b>Protein Families:</b>	Stem cell - Pluripotency
<b>MW:</b>	41.9 kDa
<b>Gene Summary:</b>	The product encoded by this gene belongs to the actin family of proteins, which are highly conserved proteins that play a role in cell motility, structure and integrity. Alpha, beta and gamma actin isoforms have been identified, with alpha actins being a major constituent of the contractile apparatus, while beta and gamma actins are involved in the regulation of cell motility. This actin is an alpha actin that is found in skeletal muscle. Mutations in this gene cause a variety of myopathies, including nemaline myopathy, congenital myopathy with excess of thin myofilaments, congenital myopathy with cores, and congenital myopathy with fiber-type disproportion, diseases that lead to muscle fiber defects with manifestations such as hypotonia. [provided by RefSeq, Sep 2019]

Product images:



Circular map for RC203112