

Product datasheet for **RG203112**

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:	TurboGFP
Symbol:	Actin
Synonyms:	ACTA; ASMA; CFTD; CFTD1; CFTDM; MPFD; NEM1; NEM2; NEM3; SHPM
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG203112 representing NM_001100 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTGCGACGAAGACGAGACCACCGCCCTCGTGTGCGACAATGGCTCCGGCCTGGTAAAGCCGGCTTCG
CCGGGGATGACGCCCTAGGGCCGTGTTCCCGTCCATCGTGGGCCGCCCGACACCAGGGCGTCATGGT
CGGTATGGGTGAGAAAGATTCTACGTGGGCGACGAGGCTCAGAGCAAGAGAGGTATCCTGACCCTGAAG
TACCCTATCGAGCACGGCATCATCACTACTGGGATGACATGGAGAAGATCTGGCACCACACCTTCTACA
ACGAGCTTCGCGTGGCTCCCGAGGAGCACCCACCTGCTCACCGAGGCCCCCTCAATCCCAAGGCCAA
CCGCGAGAAGATGACCCAGATCATGTTTGAGACCTTCAACGTGCCGCCATGTACGTGGCCATCCAGGCC
GTGCTGTCCCTCTACGCCTCCGGCAGGACCACCGCATCGTGTGGACTCCGGCGACGGCGTCAACCACA
ACGTGCCCATTTATGAGGGCTACGCGCTGCCGACGCCATCATGCGCTGGACCTGGCGGGCCGCGATCT
CACCGACTACCTGATGAAGATCCTCACTGAGCGTGGTACTCCTTCGTGACCACAGCTGAGCGCGAGATC
GTGCGGACATCAAGGAGAAGCTGTGCTACGTGGCCCTGGACTTCGAGAACGAGATGGCGACGGCCGCT
CCTCCTCCTCCCTGAAAAGAGCTACGAGCTGCCAGACGGGCAGGTCATACCATCGGCAACGAGCGCTT
CCGCTGCCCGGAGACGCTCTCCAGCCCTCCTTCATCGGTATGGAGTCGGCGGGCATTACGAGACCACC
TACAACAGCATCATGAAGTGTGACATCGACATCAGGAAGGACCTGTATGCCAACAACGTCAATGTCCGGGG
GCACCAGATGTACCCTGGGATCGCTGACCGCATGCAGAAAGAGATCACCGCGCTGGCACCCAGCACCAT
GAAGATCAAGATCATCGCCCCGCGGAGCGCAAATACTCGGTGTGGATCGCGGGCTCCATCCTGGCCTCG
CTGTCCACCTCCAGCAGATGTGGATCACCAAGCAGGAGTACGACGAGGCCGGCCCTTCCATCGTCCACC
GCAATGCTTC

ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG203112 representing NM_001100
 Red=Cloning site Green=Tags(s)

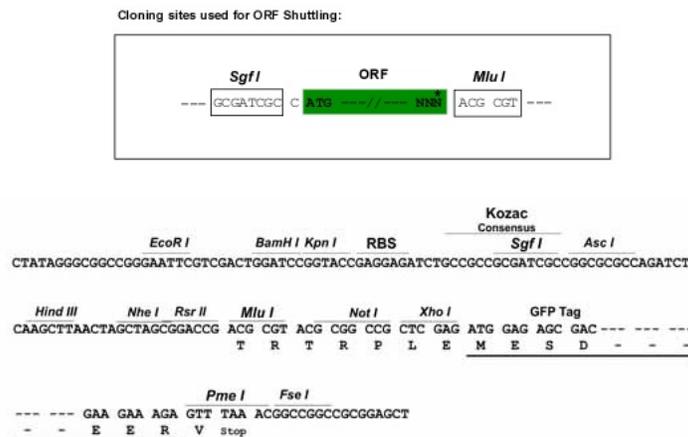
MCDEDETTALVCDNGSGLVKAGFAGDDAPRAVFPISVGRPRHQVVMGMGQKDSYVGDEAQS¹SRGILTLK
 YPIEHGIITNWDMEKIWHHTFYNELRVAP²EEHPTLLTEAPLNPKANREKMTQIMFETFNVPAMYVAIQ³A
 VLSLYASGR⁴TTGIVLDSGDGVTHNVPIYEGYALPHAIMRLDLAGRDLTDYLMKILTERGYSFVTTAEREI
 VRDIKEKLCYVALDFENEMATAASSSSLEKSYELPDGQVITIGNERFRCPETLFQPSFIGMESAGIHETT
 YNSIMKCDIDIRKDLYANNVMSGTTMYPGIADRMQKEITALAPSTMKIKIIAPPERKYSVWIGGSILAS
 LSTFQQMWITKQEYDEAGPSIVHRKCF

TRTRPLE - GFP Tag - V

Chromatograms: https://cdn.origene.com/chromatograms/ja2491_e02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001100

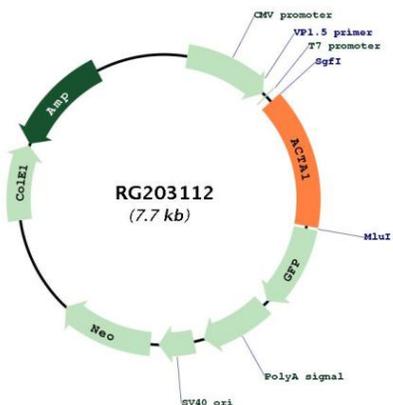
ORF Size: 1131 bp

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 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:	<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_001100.4
RefSeq Size:	1509 bp
RefSeq ORF:	1134 bp
Locus ID:	58
UniProt ID:	P68133
Cytogenetics:	1q42.13
Domains:	ACTIN
Protein Families:	Stem cell - Pluripotency
Gene Summary:	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 RG203112