

Product datasheet for **RG208531**

ACTN2 (NM_001103) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ACTN2 (NM_001103) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ACTN2
Synonyms:	CMD1AA; CMH23; MPD6; MYOCOZ
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG208531 representing NM_001103
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAACCAGATAGAGCCCGCGTGCAGTACAACACTACGTGTACGACGAGGATGAGTACATGATCCAGGAGG
 AGGAGTGGGACCGGACCTGCTCCTGGACCCAGCCTGGGAGAAGCAGCAGAGGAAGACCTTCACTGCCTG
 GTGTAACCTCCACCTAAGGAAAGCCGGCACCCAGATTGAGAACATCGAGGAAGACTTCAGGAATGCCTT
 AAGCTCATGCTGCTTTTGGAAAGTCATCTCAGGGGAAAGGCTGCCCAAACCTGACCGGGGAAAAATGCGGT
 TCCACAAAATTGCTAATGTCAACAAAGCTTTGGATTACATAGCCAGCAAAGGGGTGAAACTGGTGTCCAT
 CGGCGCTGAAGAAATTGTTGATGGCAATGTGAAAATGACCCTGGGTATGATCTGGACCATCATCCTTCGC
 TTTGCTATTCAGGATATTCGGTTGAAGAAACATCTGCCAAAGAAGGTCTGCTGCTTTGGTGTGAGAGGA
 AAAGTGTCTCTTATAGAAATGTGAACATTCAGAACTTCCATACTAGCTGGAAAGATGGCCTTGGACTCTG
 TGCCCTCATCCACCGACACCGGCTGACCTCATTGACTACTCAAAGCTTAAACAAGGATGACCCCATAGGA
 AATATTAACCTGGCCATGGAAATCGCTGAGAAGCACCTGGATATTCCTAAAATGTTGGATGCTGAAGACA
 TCGTGAACACCCCTAAACCCGATGAAAGAGCCATCATGACGTACGCTCTCTTGTCTTACCACGCTTTTGC
 GGGCGCGGAGCAGGCCGAGACAGCGGCTAACAGGATATGTAAGGTTCTTGTCTGTAATCAAGAGAATGAG
 AGGCTGATGGAAGAATATGAGAGGCTAGCGAGTGAAGTCTTTGGAATGGATTCGTCGCACGATCCCCTGGC
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 AAGTGGCGGATCAGCAACCGTCTGCCTTCATGCCCTCCGAGGCAAGATGGTGTGCGATATTGCTGGTG
 CCTGGCAGAGGCTGGAGCAGGCTGAGAAGGTTACGAGGAGTGGTTGCTCAATGAGATTCCGAGAGTGA
 GCGCTTGGAAACACTGGCTGAGAAGTTCAGGCAGAAGGCCCTCAACGCACGAGACTTGGGCTTATGGCAAA
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 GACCGACTGGGAACGCTTACTCAGAAGAGGAGAGAAGCCCTAGAGAGAATGGAGAATTTGCTAGAAAACCA
 TTGATCAGCTTACCTGGAGTTTGCCAAGAGGGCTGCTCCTTTCAACAATTGGATGGAGGGCGCTATGGA
 GGATCTGCAAGATATGTTCAATTGTCACAGCATTGAGGAGATCCAGAGTCTGATCACTGCGCATGAGCAG
 TTCAAGGCCACGCTGCCCGAGGCGGACGGAGAGCGGCAGTCCATCATGGCCATCCAGAACGAGGTGGAGA
 AGGTGATTCAGAGCTACAACATCAGAATCAGCTCAAGCAACCCGTACAGCACTGTACCATGGATGAGCT
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 CGCCAGCATGCTAACGAGCGTCTGAGGCGCCAGTTTGTGCCAAGCCAAATGCCATTGGGCCCTGGATCC
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 GGCTGATGGATCATGAGGATTCAGAGCCTGCCTGATTTCCATGGGTTATGACCTGGGTGAAGCCGAAT
 TTGCCCGCATTATGACCCTGGTATGATCCCAACGGGCAAGGCACCGTACCTTCCAATCCTTCATCGACTT
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 GATAAGCCATACATCCTGGCGGAGGAGCTGCGTCCGGAGCTGCCCCGGATCAGGCCAGTACTGCATCA
 AGAGGATGCCCGCTACTCGGGCCAGGCAGTGTGCTGGTGCCTGGATTACGCTGCGTCTCTTCCGC
 ACTCTACGGGGAGAGCGATCTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG208531 representing NM_001103
 Red=Cloning site Green=Tags(s)

MNQIEPGVQYNYVYDEDEYMIQEEEWDRDLLLDPAWEKQQRKFTTAWCNSHLRKAGTQIENIEEDFRNGL
 KLMLLLEVISGERL PKPDRGKMRFHKIANVNKALDYIASKGVKLVSIGAEI V DGNVKMTL GMIWTIILR
 FAIQDISVEETS AKEGLLLWCQRKTAPYRNVNIQNFHTSWKDGLGLCALIHRHRPDLIDYSKLNKDDPIG
 NINLAMEIAEKHL DIPKMLDAEDIVNTPKPDERAIMTYVSCFYHAFAGAEQAETAANRICKVLAVNQENE
 RLMEEYERLASELLEWIRRTIPWLENRTPEKTMQAMQKLEDFRDYRRKHKPPKVQEKQLEINFNTLQT
 KLRISNRP AFMPSEGK MVS DIAGAWQRLEQA EKG YEEWLLNEIRRLERLEHLAEKFRQKASTHETWAYGK
 EQILLQKDYESASL TEVRALLRKHEAFESDLAAHQDRVEQIAAIAQELNELDYHDAVNVNDR CQKICDQW
 DRLGTLTQKRREALERMEK LLETIDQLHLEFAKRAAPFNNWMEGAMEDLQDMFIVHSIEEIQSLITAEHQ
 FKATLPEADGERQSIMAIQNEVEKVIQSYNIRISSNPYSTVTMDELRTKWDKVKQLVPIRDQSLQEELA
 RQHANERLRRQFAAQANAIGPWIQNKMEEIARSSIQITGALEDQMNQLKQYEHNIINYKNNIDKLEGDHQ
 LIQEALVFDNKHTNYTMEHIRVGWELLLTTIARTINEVETQILTRDAKGITQEQMNEFRASFNHFDRRKN
 GLMDHEDFRACLISMGYDLGEAEFARIMTLVDPNGQGT VTFQSFIDFMTRETADTD TAEQVIASFRILAS
 DKPYILAEELRRELPPDQAQYCIKRPAYSGPGSVP GALDYAAFSSALYGESDL

TRTRPLE - GFP Tag - V

Restriction Sites:

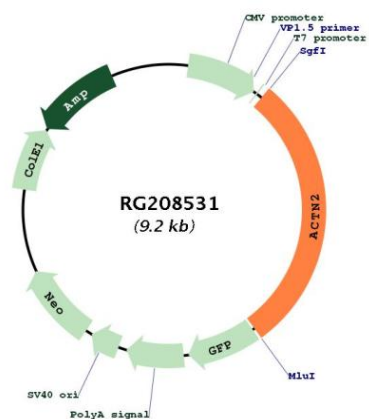
SgfI-MluI

Cloning Scheme:



ACCN:	NM_001103
ORF Size:	2682 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_001103.3
RefSeq Size:	4181 bp
RefSeq ORF:	2685 bp
Locus ID:	88
UniProt ID:	P35609
Cytogenetics:	1q43
Domains:	CH, spectrin, EFh
Protein Pathways:	Adherens junction, Arrhythmogenic right ventricular cardiomyopathy (ARVC), Focal adhesion, Leukocyte transendothelial migration, Regulation of actin cytoskeleton, Systemic lupus erythematosus, Tight junction
Gene Summary:	Alpha actinins belong to the spectrin gene superfamily which represents a diverse group of cytoskeletal proteins, including the alpha and beta spectrins and dystrophins. Alpha actinin is an actin-binding protein with multiple roles in different cell types. In nonmuscle cells, the cytoskeletal isoform is found along microfilament bundles and adherens-type junctions, where it is involved in binding actin to the membrane. In contrast, skeletal, cardiac, and smooth muscle isoforms are localized to the Z-disc and analogous dense bodies, where they help anchor the myofibrillar actin filaments. This gene encodes a muscle-specific, alpha actinin isoform that is expressed in both skeletal and cardiac muscles. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2013]

Product images:



Circular map for RG208531