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Product datasheet for SC119154

gamma Actin (ACTG1) (NM_001614) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	gamma Actin (ACTG1) (NM_001614) Human Untagged Clone
Tag:	Tag Free
Symbol:	gamma Actin
Synonyms:	ACT; ACTG; DFNA20; DFNA26; HEL-176
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC119154 sequence for NM_001614 edited (data generated by NextGen Sequencing)

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ATGGAAGAAGAGATCGCCGCGCTGGTCATTGACAATGGCTCCGGCATGTGCAAAGCTGGT
TTTGCTGGGGACGACGCTCCCCGAGCCGTGTTTCCTTCCATCGTCGGGCGCCCCAGACAC
CAGGGCGTCATGGTGGGCATGGGCCAGAAGGACTCCTACGTGGGCGACGAGGCCCAGAGC
AAGCGTGGCATCCTGACCCTGAAGTACCCCATTGAGCATGGCATCGTCACCAACTGGGAC
GACATGGAGAAGATCTGGCACCACACCTTCTACAACGAGCTGCGCGTGGCCCCGGAGGAG
CACCCAGTGCTGCTGACCGAGGCCCCCCTGAACCCCAAGGCCAACAGAGAGAAGATGACT
CAGATTATGTTTGAGACCTTCAACACCCCGGCCATGTACGTGGCCATCCAGGCCGTGCTG
TCCCTCTACGCCTCTGGGCGCACCACTGGCATTGTCATGGACTCTGGAGACGGGGTCACC
CACACGGTGCCCATCTACGAGGGCTACGCCCTCCCCCACGCCATCCTGCGTCTGGACCTG
GCTGGCCGGGACCTGACYGACTACCTCATGAAGATCCTCACTGAGCGAGGCTACAGCTTC
ACCACCACGGCCGAGCGGGAAATCGTGCGYGACATYAAGGAGAAGCTGTGCTACGTCGCC
CTGGACTTCGAGCAGGAGATGGCCACCGCCGCATCCTCCTCTTCTCTGGAGAAGAGCTAC
GAGCTGCCYGAYGGCCAGGTCATCACCATTGGCAATGAGCGGTTCCGGTGTCCGGAGGCG
CTGTTCCAGCCTTCCTTCCTGGGTATGGAATCTTGCGGCATCCACGAGACYACCTTCAAC
TCCATCATGAAGTGTGACGTGGACATCCGCAAAGACCTGTACGCCAACACRGTGCTGTCG
GGCGGCACCACCATGTATCCGGGCATTGCCGACAGGATGCAGAAGGAGATCACCGCCCTG
GCGCCCAGCACCATGAAGATCAAGATCATCGCACCCCCAGAGCGCAAGTACTCSGTGTGG
ATCGGYGGCTCCATCCTGGCCTCRCTGTCCACCTTCCAGCAGATGTGGATYAGCAAGCAG
GAGTACGACGAGTCGGGCCCCTCCATCGTCCACCGCAAATGCTTCTAA

Clone variation with respect to NM_001614.3
558 c=>y;630 c=>y;636 c=>y;729 c=>y;732 t=>y;831 c=>y;891 g=>r;918 c=>t;1014 g=>s;1026
t=>y;1044 a=>r;1071 t=>y
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_001614 unedited
CATATATTTGTATACGACTCACTTATAGGGCGGCCGCGAATTCGCACGAGGGCCAACTCT
CGCACTCTGTTCTTCCGCCGCTCCGCCGTCGCGTTTCTCTGCCGGTCGCAATGGAAGAAG
AGATCGCCGCGCTGGTCATTGACAATGGCTCCGGCATGTGCAAAGCTGGTTTTGCTGGGG
ACGACGCTCCCCGAGCCGTGTTTCCTTCCATCGTCGGGCGCCCCAGACACCAGGGCGTCA
TGGTGGGCATGGGCCAGAAGGACTCCTACGTGGGCGACGAGGCCCAGAGCAAGCGTGGCA
TCCTGACCCTGAAGTACCCCATTGAGCATGGCATCGTCACCAACTGGGACGACATGGAGA
AGATCTGGCACCACACCTTCTACAACGAGCTGCGCGTGGCCCCGGAGGAGCACCCAGTGC
TGCTGACCGAGGCCCCCCTGAACCCCAAGGCCAACAGAGAGAAGATGACTCAGATTATGT
TTGAGACCTTCAACACCCCGGCCATGTACGTGGCCATCCAGGCCGTGCTGTCCCTCTACG
CCTCTGGGCGCACCACTGGCATTGTCATGGACTCTGGAGACGGNGTCACCCACACGGTGC
CCATCTACGAAGGCTACGCCCTCCCCCACGCCATCCTGCGTCTGGACCTGGCTGGCCGGG
ACCTGACCGACTACCTCATGAAGATCCTCACTGAGCGAGGCTACAGCTTCACCACCACGG
CCGAGCGGGAAATCGTGCGCGACATCAAAGGAGAAGCTGTGCTACGTCGCCCCTGGACTT
CGAGCANGAGATGGCCACCGNCGCATNCTCCTCTTCTCTGGAGAAGAGCTACCAGCTGNC
CCGATGCCCCAGTCATCACCATTGGNCATGAGCGGGTTCCCGTGTTCCGGAGGCCCTGTT
CCAGCCTTCCTTCTTGGGTATGGAATTTTGCGGCATTCACGAGAACACCTT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_001614 unedited
GCCGCAATCTAGTATCGAGTTTTTTTTTTTTTTTTTGGTTACGGCAGCACTTTTATTTT
TCCTTACACAATGACGTGTTGCTGGGGCCTAATGTTCTCACATAACAGTAGAAAACCAAA
ATTTGTTGTCATCTCTTCAAAGAATCGAGAATTGCGTACAAAAAAAACCTTACATAAATT
AAGAATGAATACATTTACAGGCGTAAATGCAAACCGCTTCCAACTCAAAGCAAGTAACAG
CCCACGGTGTTCTGGCCAAAGACATCAGCTAAGAAAGGAAACTGGGTCCTACGGCTTGGA
CTTTCCAACCCTGACAGACCCGCAAGACAAAACAACTGGTTCTTGCCAGCCTCTAGAGAA
ATCCCAGAACACTCAGCCCTGACACGTTAATACCCTGCACAGATCAGAGGCTGCTGGCCA
CACAGACTCACCAAGCCACAGACTTGTCTTCCACAAGCACGTTCTTACCTTATCCACGAA
GTGACCAAGCCACACGTACTAAAGGTTGAACTCAAAGATATGTACAGGGTATTAAACAAA
TACCAAGGGGAACAGTTAACTTCAATACAAGGTCAAAATCAGCAACAAGTTCTACAATCC
AGTGCTGATATCAGATACAAGCTTCAAGGACAATTTCTTTTCGAAGGCTTATTCCAGTTT
CGTGAGGCTAGCATGAAGTGTGTGCATTTGCCAGGGGCAAATTTCTATTTCTCAATTAAC
CCATGCAGCAAATGCTACGCATCTGCTGAGTCCGTTTAAAGCACTTGCGGTCGACGATTG
GAGGGCCCGACTCCGCGTACTCCTGCTTGCTATTCCCCATCTGCCTGGAAGTTCACAGTG
AGGCCAGGATTGAGCCACCGATCCCCACCGAGTCTTGCGCTCTGGGGCTGCAAGATCTTG
ATCTCATGGGGCTGGCGCCAGGCCGGGATTTCTTTTGTTCCTGCGGCAATGCCGGTACAT
GTTGGGTCCCCGCAAACCTGTTGGCGCCAG

Restriction Sites: NotI-NotI

ACCN: NM_001614

Insert Size: 1950 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_001614.2, NP_001605.1
RefSeq Size:	1919 bp
RefSeq ORF:	1128 bp
Locus ID:	71
UniProt ID:	P63261
Cytogenetics:	17q25.3
Domains:	ACTIN
Protein Pathways:	Adherens junction, Arrhythmogenic right ventricular cardiomyopathy (ARVC), Dilated cardiomyopathy, Focal adhesion, Hypertrophic cardiomyopathy (HCM), Leukocyte transendothelial migration, Pathogenic Escherichia coli infection, Regulation of actin cytoskeleton, Tight junction, Vibrio cholerae infection, Viral myocarditis
Gene Summary:	Actins are highly conserved proteins that are involved in various types of cell motility and in maintenance of the cytoskeleton. Three main groups of actin isoforms have been identified in vertebrate animals: alpha, beta, and gamma. The alpha actins are found in muscle tissues and are a major constituent of the contractile apparatus. The beta and gamma actins co-exist in most cell types as components of the cytoskeleton and as mediators of internal cell motility. Actin gamma 1, encoded by this gene, is a cytoplasmic actin found in all cell types. Mutations in this gene are associated with DFNA20/26, a subtype of autosomal dominant non-syndromic sensorineural progressive hearing loss and also with Baraitser-Winter syndrome. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2017] Transcript Variant: This variant (2) differs in the 5' UTR, compared to variant 1. Variants 1 and 2 encode the same protein.