

Product datasheet for **SC324356**

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:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene sequence for NM_001614.2
 GCCGCTGCCAGCTCTCGCACTCTGTTTTCCGCCGCTCCGCCGTCGCGTTTCTCTGCCGG
 TCGCAATGGAAGAAGAGATCGCCGCGCTGGTCATTGACAATGGCTCCGGCATGTGCAAAG
 CTGTTTTGCTGGGGACGACGCTCCCCGAGCCGTGTTTCTTCCATCGTCGGGGCGCCCCA
 GACACCAGGGCGTCATGGTGGGCATGGGCCAGAAGGACTCCTACGTGGGCGACGAGGCC
 AGAGCAAGCGTGGCATCCTGACCCTGAAGTACCCATTGAGCATGGCATCGTCACCAACT
 GGGACGACATGGAGAAGATCTGGCACCACACCTTCTACAACGAGCTGCGCGTGGCCCCGG
 AGGAGCACCCAGTGTCTGACCGAGGCCCCCTGAACCCAAGGCCAACAGAGAGAAGA
 TGACTCAGATTATGTTTGAACCTTCAACACCCCGCCATGTACGTGGCCATCCAGGCCG
 TGCTGTCCCTCTACGCCTCTGGGCGCACCCTGGCATTGTCTGACTCTGGAGACGGGG
 TCACCCACACGGTGCCCATCTACGAGGGCTACGCCCTCCCCACGCCATCCTGCGTCTGG
 ACCTGGCTGGCCGGGACCTGACCGACTACCTCATGAAGATCCTCACTGAGCGAGGCTACA
 GCTTCACCACCACGGCCGAGCGGAAATCGTGCGGACATCAAGGAGAAGCTGTGCTACG
 TCGCCCTGGACTTCGAGCAGGAGATGGCCACCGCCGATCCTCCTTCTCTGGAGAAGA
 GCTACGAGCTGCCGATGGCCAGGTCATCACCATTGGCAATGAGCGGTTCCGGTGTCCGG
 AGGCGCTGTTCCAGCCTTCTTCTGGGTATGGAATCTTGCGGCATCCACGAGACCACCT
 TCAACTCCATCATGAAGTGTGACGTGGACATCCGCAAAGACCTGTACGCCAACACGGTGC
 TGTCCGGCGCCACCACCATGTACCCGGCATTGCCGACAGGATGCAGAAGGAGATCACCG
 CCCTGGCGCCACGACCATGAAGATCAAGATCATCGCACCCCCAGAGCGCAAGTACTCGG
 TGTGGATCGGTGGCTCCATCCTGGCCTCACTGTCCACCTTCCAGCAGATGTGGATTAGCA
 AGCAGGAGTACGACGAGTCGGGCCCTCCATCGTCCACCGCAAATGCTTCTAAACGGACT
 CAGCAGATGCGTAGCATTGCTGCATGGGTTAATTGAGAATAGAAATTTGCCCTGGCAA
 ATGCACACACCTCATGCTAGCCTCACGAACTGGAATAAGCCTTGAAAAGAAATTTGCC
 TTGAAGTTGTATCTGATATCAGCACTGGATTGTAGAACTTGTGCTGATTTTGACCTTG
 TATTGAAGTTAACTGTTCCCTTGGTATTTGTTAATACCTGTACATATCTTTGAGTTC
 AACCTTTAGTACGTGTGGCTTGGTCACTTCGTGGCTAAGGTAAGAACGTGCTTGTGGAAG
 ACAAGTCTGTGGCTTGGTGAATCTGTGTGGCCAGCAGCCTCTGATCTGTGCAGGGTATTA
 ACGTGTCAAGGCTGAGTGTCTGGGATTTCTAGAGGCTGGCAAGAACCAGTTGTTTTG
 TCTTGGGGTCTGTCAGGGTTGAAAGTCCAAGCCGTAGGACCCAGTTTCCTTTCTTAGC
 TGATGTCTTTGGCCAGAACCCGTGGGCTGTTACTTGCTTTGAGTTGGAAGCGGTTTGCA
 TTTACGCCTGTAATGTATTCTTAATTTATGTAAGTTTTTTTTGTACGCAATTCT
 CGATTTCTTGAAGAGATGACAACAAATTTGGTTTTCTACTGTTATGTGAGAACATTAGG
 CCCCAGCAACACGTCATTGTGTAAGGAAAAATAAAAGTGCTGCCGTAAAAA
 AAAAAAAAAAAAAAAAAA

Restriction Sites: Please inquire

ACCN: NM_001614

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).

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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.