

Product datasheet for **SC319140**

alpha Actinin 4 (ACTN4) (NM_004924) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	alpha Actinin 4 (ACTN4) (NM_004924) Human Untagged Clone
Tag:	Tag Free
Symbol:	alpha Actinin 4
Synonyms:	ACTININ-4; FSGS; FSGS1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_004924.3
GAGAGGCGGCGGAATGGTGGACTACCACGCGGCGAACCAGTCGTACCAGTACGGCCCCAG
CAGCGCGGCAATGGCGCTGGCGCGGGGCGAGCATGGGCGACTACATGGCCAGGAGGA
CGACTGGGACCGGACCTGCTGCTGGACCCGGCCTGGGAGAAGCAGCAGCGCAAGACCTT
CACGGCATGGTGAACCTCCACCTGCGGAAGGCAGGCACACAGATCGAGAACATTGATGA
GGACTTCCGAGACGGGCTCAAGCTCATGCTGCTCCTGGAGGTCATATCAGGGGAGCGGTT
ACCTAAGCCGGAGCGGGGAAGATGAGAGTGCACAAAATCAACAATGTGAACAAAGCGCT
GGACTTTATTGCCAGCAAAGGCGTCAAGCTGGTCTCCATCGGGGCGAGAAGAGATTGTGGA
CGGCAACGCAAAGATGACCCTGGGAATGATCTGGACCATCATCCTTAGGTTGCCATCCA
GGACATCTCCGTGGAAGAGACCTCGGCCAAGGAAGGGCTCCTTCTCTGGTGCCAGAGAAA
GACAGCCCGTATAAGAACGTCAATGTGCAGAACTTCCACATCAGCTGGAAGGATGGTCT
TGCCTTCAATGCCCTGATCCACCGGCACAGACCAGAGCTGATTGAGTATGACAAGCTGAG
GAAGGACGACCCTGTACCAACCTGAACAATGCCTTCGAAGTGGCTGAGAAATACCTCGA
CATCCCCAAGATGCTGGATGCAGAGGACATCGTGAACACGCGCCCGGCCGACGAGAAGGC
CATAATGACCTATGTGTCCAGCTTCTACCATGCCTTTTCAGGAGCGCAGAAGGCTGAAAC
TGCCGCCAACCGGATCTGTAAGGTGCTGGCTGTCAACCAAGAGAACGAGCACCTGATGGA
GGACTACGAGAAGCTGGCCAGCGACCTCCTGGAGTGGATCCGGCGCACCATCCCCTGCT
GGAGGACCGTGTGCCCCAAAAGACTATCCAGGAGATGCAGCAGAAGCTGGAGGACTTCCG
CGACTACCGCGTGTGCACAAGCCGCCAAGGTGCAGGAGAAGTGCCAGCTGGAGATCAA
CTTCAACACGCTGCAGACCAAGCTGCGCCTCAGCAACCGCCCGCCTTCATGCCCTCCGA
GGCAAGATGGTCTCGGACATCAACAATGGCTGGCAGCACTTGGAGCAGGCTGAGAAGGG
CTACGAGGAGTGGCTGCTGAATGAGATCCGAGGCTGGAGCGGCTCGACCACCTGGCAGA
GAAGTTCCGGCAGAAGGCCTCCATCCACGAGGCCTGGACTGACGGGAAGGAAGCCATGCT
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CGAGGCCCTTCGAGAGCGACCTGGCTGCGCACCAGGACCGCTGGAGCAGATCGCCGCCAT
TGCCAGGAGCTCAACGAGCTGGATTACTACGACTCCCACAATGTCAACACCCGGTGCCA
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GGAGAAAACAGAGAAGCAGCTGGAGGCCATCGACCAGCTGCACCTGGAATACGCCAAGCG
CGCGGCCCCCTTCAACAACCTGGATGGAGAGCGCCATGGAGGACCTCCAGGACATGTTTCAT
CGTCCATACCATCGAGGAGATTGAGGGCCTGATCTCAGCCATGACCAGTTCAAGTCCAC
CCTGCCGACGCCGATAGGGAGCGCGAGGCCATCCTGGCCATCCACAAGGAGGCCAGAG
GATCGCTGAGAGCAACCACATCAAGCTGTCGGGCAGCAACCCCTACACCACCGTCACCCC
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CCTCCTGGAGGAGCAGAGCAAGCAGCAGTCCAACGAGCACCTGCGCCGCCAGTTCCGCCAG
CCAGGCCAATGTTGTGGGGCCCTGGATCCAGACCAAGATGGAGGAGATCGGGCGCATCTC
CATTGAGATGAACGGGACCCTGGAGGACCAGCTGAGCCACCTGAAGCAGTATGAACGCAG
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CGACTACAAGTCTTCTCCACGGCCTTGTATGGCGAGAGCGACCTGTGAGGCCCCAGAGA
CCTGACCCAACACCCCGACGGCCTCCAGGAGGGGCTGGGCAGCCCCACAGTCCCATTCC
CTCCACTCTGTATCTATGCAAAGCACTCTCTGCAGTCTCCGGGGTGGGTGGGTGGGCAG
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GACCAGGTTGGGGAGACTTGGGGCCAGCGCTTCTGGTCTGGTAAATATGTATGATGTGTT
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CCCTGGGATGCCTCACCACACCCAGGTCTCTTCTTTGCTCTGAGGTCCCTTCAAGGCCT
CCCCAATCCAGGCCAAAGCCCCATGTGCCTTGTCCAGGAACTGCCTGGGCCATGCGAGGG
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CGGCTTGTCTTGTCTGGCCTCACGTGTCTCAGATTTTCTAAGAACCAAAAAAAAAAAG
GAAAAAAAAACACAAAACAACAAAACCAAAAAAAAAAAAAAAAAATCACAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA
    
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Restriction Sites:

Please inquire

ACCN:

NM_004924

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 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:	<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_004924.3 , NP_004915.2
RefSeq Size:	3893 bp
RefSeq ORF:	2736 bp
Locus ID:	81
UniProt ID:	O43707
Cytogenetics:	19q13.2
Domains:	CH, spectrin, EFh
Protein Families:	Druggable Genome
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 nonmuscle, alpha actinin isoform which is concentrated in the cytoplasm, and thought to be involved in metastatic processes. Mutations in this gene have been associated with focal and segmental glomerulosclerosis. [provided by RefSeq, Jul 2008]