

Product datasheet for **SC109056**

CDC42 (NM_044472) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDC42 (NM_044472) Human Untagged Clone
Tag:	Tag Free
Symbol:	CDC42
Synonyms:	CDC42Hs; G25K; TKS
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_044472 edited GAATTCGGCAGGCTGAGGTCATCATCAGATTTGAAATATTTAAAGTGGATACAAAAC TATTTTCAGCAATGCAGACAATTAAGTGTGTTGTTGTGGCGATGGTCTGTTGGTAAAAC ATGTCTCCTGATATCCTACACAACAAACAAATTTCCATCGGAATATGTACCGACTGTTTT TGACAACATATGCAGTCACAGTTATGATTGGTGGAGAACCATATACTCTTGACTTTTTGA TACTGCAGGGCAAGAGGATTATGACAGATTACGACCGCTGAGTTATCCACAAACAGATGT ATTTCTAGTCTGTTTTTCAGTGGTCTCTCCATCTTCATTTGAAAACGTGAAAGAAAAGTG GGTGCCTGAGATAACTCACCCTGTCCAAAGACTCCTTTCTTGCTTGTGGGACTCAAAT TGATCTCAGAGATGACCCCTCTACTATTGAGAACTTGCCAAGAACAACAGAAGCCTAT CACTCCAGAGACTGCTGAAAAGCTGGCCCGTGACCTGAAGGCTGTCAAGTATGTGGAGTG TTCTGCACTTACACAGAGAGGTCTGAAGAATGTGTTTGATGAGGCTATCCTAGCTGCCCT CGAGCCTCCGGAAACTCAACCCAAAAGGAAGTGTGTATATTCTAAACTGTTTTCTCCTT CCCTTCTTTGCTGCTGCTTCTGTCCCACTACTGTAGAAAAGATCGTTTAAAAACAAGGA ATAAAAACCATCCTGTTTGAAGCCTCTGCGTCTTTTTACTCACCACCTTAXXXXXXXXXX XXXXCTCGAC



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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_044472 unedited</p> <pre> AGTCAAATTTGTATACGACTCATATAGGGCGGCCGGAATTCGCACGAGGCTGAGGTCAT CATCAGATTTGAAATATTTAAAGTGGATACAAAATATTTTCAGCAATGCAGACAATTAAG TGTGTTGTTGTTGGGCGATGGTGTCTGGTAAACATGTCTCCTGATATCCTACACAACA AACAAATTTCCATCGGAATATGTACCGACTGTTTTTGACAATATGCAGTCACAGTTATG ATTGGTGGAGAACCATATACTCTTGGACTTTTTGATACTGCAGGGCAAGAGGATTATGAC AGATTACGACCGCTGAGTTATCCACAACAGATGTATTTCTAGTCTGTTTTTCAGTGGTC TCTCCATCTTCATTTGAAAACGTGAAAGANAAGTGGGTGCCTGAGATAACTCACCCTGT CCAAAGACTCCTTTCTTGTCTTGGGACTCAAATGATCTCAGAGATGACCCCTCTACT ATTGAGAACTTGCCAAGAACAACAGAAGCCTATCACTCCAGAGACTGCTGAAAAGCTG GCCCGTGACCTGAAGGCTGTCAAGTATGTGGAGTGTCTGCACTTACACAGAGAGGTCG AAGAATGTGTTTGTAGGCTATCCTAGCTGCCCTCGAGCCCTCGGAACTCNACCCAAAA GAAGTGTGTATATTCTAACTGGTTTCTCCTCCCTTNCCTGCTGCTGCTTCTGTCCC ACTACTGTAGAAAGATCGTTTAAANAACAAGGAATAAACATCCTGTTTAAAAGCCTCTG CGTCCTTTTACTACCACCTAGAGCACCTCTGTATTAGTTTTTGTCAAGATGCATTAT CATATAAATTTTTTGGGATCAGTAGCCAAGTGGGACTTGTTTAAACGTTCTGCTGCCTG GATTGGCCTGAAGCTCAAAGCTTTTTGGTTGGAATACTATTGGCAAAGG </pre>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_044472 unedited</p> <pre> GGCAGCAATCTAGAGTCGAGTT TTTTTAAACAACGGGTGTATTTTTTAAATTTCAAATTTGAAGTAACCACAATTGTTT TTTTCCCTCACAATAAAATCAAAGCCGAAAAATAAAGGGGCGAGTTTACATCTCAA CATTAACAAACTGTAAGTCAACTGTTTAAATGGATGTTATTCTTAAAAAATAATGTAACA AATGAACCTATAAAGCAGTAGCAAATACCTCAATTTCTTCCCAACCCAACTGACAAAT ACTCCACTACAGCACAACAGCCAAAGCAACAGCAACACAAGTTTCACCGCCAAAGGA AAACCAGAAAAGAATCCTCCCTTCCCATTACTTTACTAGGGCACCCCTTTTCCATAA GGGTTGGCATGCAATTACAATTAACAATTGATCATAAAAGTAAAAGGATGTTTGGGTTAC TTTCTCCCTCTAAAACAAAATCTAAAAGTGTAAAACCTTGTATTCTTCCAAAAGG ACATTTCTAAAGCCAAACCAAGTTCCTTTTGAATAGTAATCCAACCAAAAAGCTCTG AGCATCAGGCAACTCAAGCAGCAGAAGTAAAACAAGTCCAACCTGACTCCTGATCACA AAAAATTTATTTGATATTGCCTTCTGGATCAAAACTATACAGAGTTGCTCTAAGGGGGG AGTAAAAAACACGAAGCTTTTAAACAGGAGGTTTTATTCTTGTTTAAAAATCTTTTTCA GTTGTGGGCANGAACCCCNCCAAAAAAGGAAGAAAAACAGTTAAAATTTCCCCCTTC CTTTAGGTGTGATTTCCCGAGGCCAGGCAACTAGATAACCTATAAACACTTTTAAACC TCTGGGAAGGAAACCCCATCTTGAAGCCTTAGGCACGGGCACTTTTAAAT </pre>
Restriction Sites:	NotI-NotI
ACCN:	NM_044472
Insert Size:	1460 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_044472.1](#), [NP_426359.1](#)

RefSeq Size: 1135 bp

RefSeq ORF: 576 bp

Locus ID: 998

UniProt ID: [P60953](#)

Cytogenetics: 1p36.12

Domains: ras, RAS, RHO, RAB

Protein Families: Druggable Genome

Protein Pathways: Adherens junction, Axon guidance, Chemokine signaling pathway, Endocytosis, Epithelial cell signaling in Helicobacter pylori infection, Fc gamma R-mediated phagocytosis, Focal adhesion, GnRH signaling pathway, Leukocyte transendothelial migration, MAPK signaling pathway, Neurotrophin signaling pathway, Pancreatic cancer, Pathogenic Escherichia coli infection, Pathways in cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway, Tight junction, VEGF signaling pathway

Gene Summary: The protein encoded by this gene is a small GTPase of the Rho-subfamily, which regulates signaling pathways that control diverse cellular functions including cell morphology, migration, endocytosis and cell cycle progression. This protein is highly similar to *Saccharomyces cerevisiae* Cdc 42, and is able to complement the yeast *cdc42-1* mutant. The product of oncogene *Dbl* was reported to specifically catalyze the dissociation of GDP from this protein. This protein could regulate actin polymerization through its direct binding to Neural Wiskott-Aldrich syndrome protein (N-WASP), which subsequently activates Arp2/3 complex. Alternative splicing of this gene results in multiple transcript variants. Pseudogenes of this gene have been identified on chromosomes 3, 4, 5, 7, 8 and 20. [provided by RefSeq, Apr 2013]

Transcript Variant: This variant (2) has a novel 3' structure, resulting in a distinct 3' coding region compared to variant 1. The encoded isoform (2) is the same length as isoform 1 but has a distinct protein sequence. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.