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Product datasheet for RC216559

CDC42 (NM_044472) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CDC42 (NM_044472) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CDC42
Synonyms:	CDC42Hs; G25K; TKS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC216559 representing NM_044472
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCAGACAATTAAGTGTGTTGTTGTGGGCGATGGTGCTGTTGGTAAAACATGTCTCCTGATATCCTACA
CAACAAACAAATTTCCATCGGAATATGTACCGACTGTTTTTGACAACTATGCAGTCACAGTTATGATTGG
TGGAGAACCATATACTCTTGGACTTTTTGATACTGCAGGGCAAGAGGATTATGACAGATTACGACCGCTG
AGTTATCCACAAACAGATGTATTTCTAGTCTGTTTTTCAGTGGTCTCTCCATCTTCATTTGAAAACGTGA
AAGAAAAGTGGGTGCCTGAGATAACTCACCACTGTCCAAAGACTCCTTTCTTGCTTGTTGGGACTCAAAT
TGATCTCAGAGATGACCCCTCTACTATTGAGAAACTTGCCAAGAACAAACAGAAGCCTATCACTCCAGAG
ACTGCTGAAAAGCTGGCCCGTGACCTGAAGGCTGTCAAGTATGTGGAGTGTTCTGCACTTACACAGAGAG
GTCTGAAGAATGTGTTTGATGAGGCTATCCTAGCTGCCCTCGAGCCTCCGGAAACTCAACCCAAAAGGAA
GTGCTGTATATTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC216559 representing NM_044472
Red=Cloning site Green=Tags(s)

MQTIKCVVVGDGAVGKTCLLISYTTNKFPSEYVPTVFDNYAVTVMIGGEPYTLGLFDTAGQEDYDRLRPL
SYPQTDVFLVCFSVVSPSSFENVKEKWVPEITHHCPKTPFLLVGTQIDLRDDPSTIEKLAKNKQKPITPE
TAEKLARDLKAVKYVECSALTQRGLKNVFDEAILAALEPPETQPKRKCCIF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

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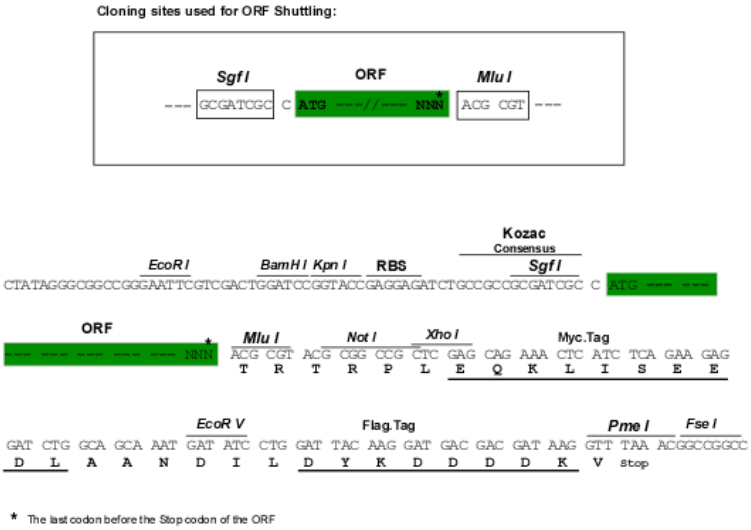
Chromatograms: https://cdn.origene.com/chromatograms/mk6475_d08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_044472

ORF Size: 573 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:
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.

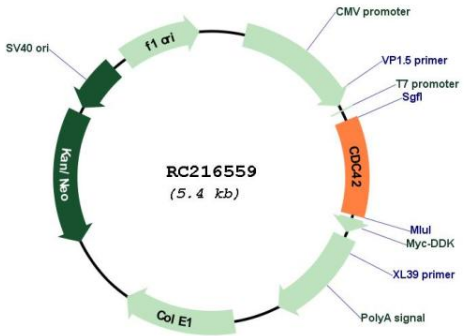
Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_044472.3

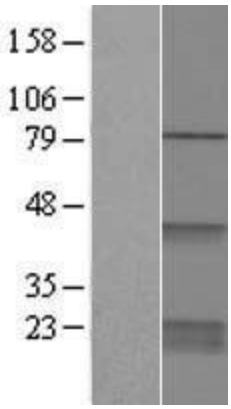
RefSeq Size: 1135 bp

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
MW:	21.1 kDa
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]

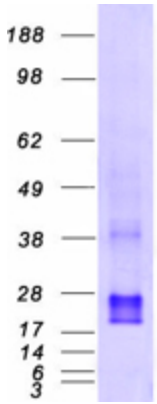
Product images:



Circular map for RC216559



Western blot validation of overexpression lysate (Cat# [LY409470]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216559 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CDC42 protein (Cat# [TP316559]). The protein was produced from HEK293T cells transfected with CDC42 cDNA clone (Cat# RC216559) using MegaTran 2.0 (Cat# [TT210002]).