OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC217705

LIM kinase 2 (LIMK2) (NM_005569) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LIM kinase 2 (LIMK2) (NM_005569) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	LIM kinase 2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC217705 representing NM_005569
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCCGCGCTGGCGGGTGAAGATGTCTGGAGGTGTCCAGGCTGTGGGGACCACATTGCTCCAAGCCAGA
TATGGTACAGGACTGTCAACGAAACCTGGCACGGCTCTTGCTTCCGGTGTTCAGAATGCCAGGATTCCCT
CACCAACTGGTACTATGAGAAGGATGGGAAGCTCTACTGCCCCAAGGACTACTGGGGGAAGTTTGGGGAG
TTCTGTCATGGGTGCTCCCTGCTGATGACAGGGCCTTTTATGGTGGCTGGGGAGTTCAAGTACCACCCAG
AGTGCTTTGCCTGTATGAGCTGCAAGGTGATCATTGAGGATGGGGATGCATATGCACTGGTGCAGCATGC
CACCCTCTACTGTGGGAAGTGCCACAATGAGGTGGTGCTGGCACCCATGTTTGAGAGACTCTCCACAGAG
TCTGTTCAGGAGCAGCTGCCCTACTCTGTCACGCTCATCTCCATGCCGGCCACCACTGAAGGCAGGCGGG
GCTTCTCCGTGTCCGTGGAGAGTGCCTGCTCCAACTACGCCACCACTGTGCAAGTGAAAGAGGTCAACCG
GATGCACATCAGTCCCAACAATCGAAACGCCATCCACCCTGGGGACCGCATCCTGGAGATCAATGGGACC
CCCGTCCGCACACTTCGAGTGGAGGAGGTGGAGGATGCAATTAGCCAGACGAGCCAGACACTTCAGCTGT
TGATTGAACATGACCCCGTCTCCCAACGCCTGGACCAGCTGCGGCTGGAGGCCCGGCTCGCTCCTCACAT
GCAGAATGCCGGACACCCCCACGCCCTCAGCACCCTGGACACCAAGGAGAATCTGGAGGGGACACTGAGG
AGACGTTCCCTAAGGCGCAGTAACAGTATCTCCAAGTCCCCTGGCCCCAGCTCCCCAAAGGAGCCCCTGC
TGTTCAGCCGTGACATCAGCCGCTCAGAATCCCTTCGTTGTTCCAGCAGCTATTCACAGCAGATCTTCCG
GCCCTGTGACCTAATCCATGGGGAGGTCCTGGGGAAGGGCTTCTTTGGGCAGGCTATCAAGGTGACACAC
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TGACTGAGGTGAAAGTGATGCGCAGCCTGGACCACCCCAATGTGCTCAAGTTCATTGGTGTGCTGTACAA
GGATAAGAAGCTGAACCTGCTGACAGAGTACATTGAGGGGGGCACACTGAAGGACTTTCTGCGCAGTATG
GATCCGTTCCCCTGGCAGCAGAAGGTCAGGTTTGCCAAAGGAATCGCCTCCGGAATGGCCTATTTGCACT
CTATGTGCATCATCCACCGGGATCTGAACTCGCACAACTGCCTCATCAAGTTGGACAAGACTGTGGTGGT
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CCCCTGAGATGCTGAACGGAAAGAGCTATGATGAGACGGTGGATATCTTCTCCTTTGGGATCGTTCTCTG
TGAGATCATTGGGCAGGTGTATGCAGATCCTGACTGCCTTCCCCGAACACTGGACTTTGGCCTCAACGTG
AAGCTTTTCTGGGAGAAGTTTGTTCCCACAGATTGTCCCCCGGCCTTCTTCCCGCTGGCCGCCATCTGCT
GCAGACTGGAGCCTGAGAGCAGACCAGCATTCTCGAAATTGGAGGACTCCTTTGAGGCCCTCTCCCTGTA
CCTGGGGGAGCTGGGCATCCCGCTGCCTGCAGAGCTGGAGGAGTTGGACCACACTGTGAGCATGCAGTAC
GGCCTGACCCGGGACTCACCTCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

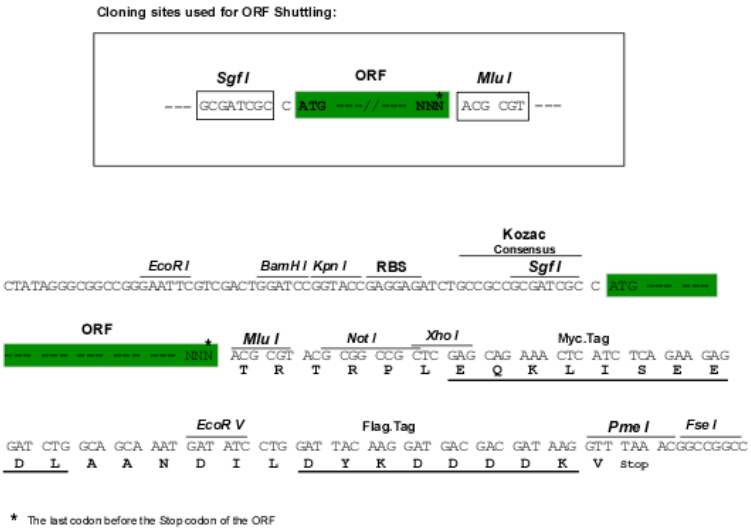
>RC217705 representing NM_005569
Red=Cloning site Green=Tags(s)

MSALAGEDVWRCPGCGDHIAPSQIWYRTVNETWHGSCFRCSECQDSLTNWYYEKDGKLYCPKDYWGKFGE
FCHGCSLLMTGPFMVAGEFKYHPECFACMSCKVIIEDGDAYALVQHATLYCGKCHNEVVLAPMFERLSTE
SVQEQLPYSVTLISMPATTEGRRGFSVSVESACSNYATTVQVKEVNRMHISPNNRNAIHPGDRILEINGT
PVRTLRVEEVEDAISQTSQTLQLLIEHDPVSQRLDQLRLEARLAPHMQNAGHPHALSTLDTKENLEGTLR
RRSLRRSNSISKSPGPSSPKEPLLFSRDISRSESLRCSSSYSQQIFRPCDLIHGEVLGKGFFGQAIKVTH
KATGKVMVMKELIRCDEETQKTFLTEVKVMRSLDHPNVLKFIGVLYKDKKLNLLTEYIEGGTLKDFLRSM
DPFPWQQKVRFAKGIASGMAYLHSMCIIHRDLNSHNCLIKLDKTVVVADFGLSRLIVEERKRAPMEKATT
KKRTLRKNDRKKRYTVVGNPYWMAPEMLNGKSYDETVDIFSFGIVLCEIIGQVYADPDCLPRTLDFGLNV
KLFWEKFVPTDCPPAFFPLAAICCRLEPESRPAFSKLEDSFEALSLYLGELGIPLPAELEELDHTVSMQY
GLTRDSPP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005569

ORF Size: 1914 bp

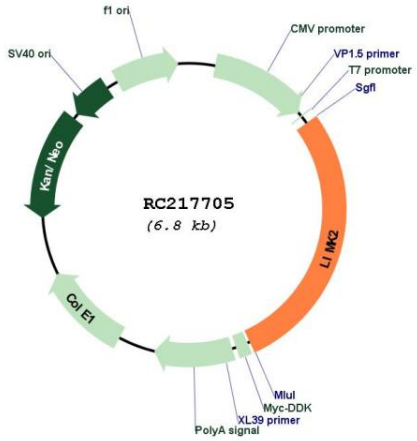
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

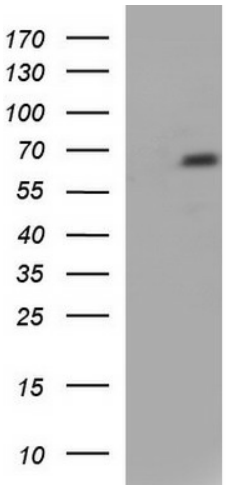
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_005569.2
RefSeq Size:	3701 bp
RefSeq ORF:	1917 bp
Locus ID:	3985
UniProt ID:	P53671
Cytogenetics:	22q12.2
Domains:	pkinase, TyrKc, PDZ, LIM, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Axon guidance, Fc gamma R-mediated phagocytosis, Regulation of actin cytoskeleton
MW:	72.1 kDa
Gene Summary:	There are approximately 40 known eukaryotic LIM proteins, so named for the LIM domains they contain. LIM domains are highly conserved cysteine-rich structures containing 2 zinc fingers. Although zinc fingers usually function by binding to DNA or RNA, the LIM motif probably mediates protein-protein interactions. LIM kinase-1 and LIM kinase-2 belong to a small subfamily with a unique combination of 2 N-terminal LIM motifs and a C-terminal protein kinase domain. The protein encoded by this gene is phosphorylated and activated by ROCK, a downstream effector of Rho, and the encoded protein, in turn, phosphorylates cofilin, inhibiting its actin-depolymerizing activity. It is thought that this pathway contributes to Rho-induced reorganization of the actin cytoskeleton. At least three transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC217705



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY LIMK2 (Cat# RC217705, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-LIMK2(Cat# [TA590208]).