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 RC220400

LIM kinase 2 (LIMK2) (NM_016733) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LIM kinase 2 (LIMK2) (NM_016733) 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)

View online »

ORF Nucleotide Sequence:

>RC220400 representing NM_016733
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGGAGTTACTTGTCAGTCCCGGCTTACTTCACCTCCAGAGACCTGTTTCGGTGTTCAGAATGCCAGG
ATTCCCTCACCAACTGGTACTATGAGAAGGATGGGAAGCTCTACTGCCCCAAGGACTACTGGGGGAAGTT
TGGGGAGTTCTGTCATGGGTGCTCCCTGCTGATGACAGGGCCTTTTATGGTGGCTGGGGAGTTCAAGTAC
CACCCAGAGTGCTTTGCCTGTATGAGCTGCAAGGTGATCATTGAGGATGGGGATGCATATGCACTGGTGC
AGCATGCCACCCTCTACTGTGGGAAGTGCCACAATGAGGTGGTGCTGGCACCCATGTTTGAGAGACTCTC
CACAGAGTCTGTTCAGGAGCAGCTGCCCTACTCTGTCACGCTCATCTCCATGCCGGCCACCACTGAAGGC
AGGCGGGGCTTCTCCGTGTCCGTGGAGAGTGCCTGCTCCAACTACGCCACCACTGTGCAAGTGAAAGAGG
TCAACCGGATGCACATCAGTCCCAACAATCGAAACGCCATCCACCCTGGGGACCGCATCCTGGAGATCAA
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CAGCTGTTGATTGAACATGACCCCGTCTCCCAACGCCTGGACCAGCTGCGGCTGGAGGCCCGGCTCGCTC
CTCACATGCAGAATGCCGGACACCCCCACGCCCTCAGCACCCTGGACACCAAGGAGAATCTGGAGGGGAC
ACTGAGGAGACGTTCCCTAAGGCGCAGTAACAGTATCTCCAAGTCCCCTGGCCCCAGCTCCCCAAAGGAG
CCCCTGCTGTTCAGCCGTGACATCAGCCGCTCAGAATCCCTTCGTTGTTCCAGCAGCTATTCACAGCAGA
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TGGATGGCCCCTGAGATGCTGAACGGAAAGAGCTATGATGAGACGGTGGATATCTTCTCCTTTGGGATCG
TTCTCTGTGAGATCATTGGGCAGGTGTATGCAGATCCTGACTGCCTTCCCCGAACACTGGACTTTGGCCT
CAACGTGAAGCTTTTCTGGGAGAAGTTTGTTCCCACAGATTGTCCCCCGGCCTTCTTCCCGCTGGCCGCC
ATCTGCTGCAGACTGGAGCCTGAGAGCAGACCAGCATTCTCGAAATTGGAGGACTCCTTTGAGGCCCTCT
CCCTGTACCTGGGGGAGCTGGGCATCCCGCTGCCTGCAGAGCTGGAGGAGTTGGACCACACTGTGAGCAT
GCAGTACGGCCTGACCCGGGACTCACCTCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC220400 representing NM_016733
Red=Cloning site Green=Tags(s)

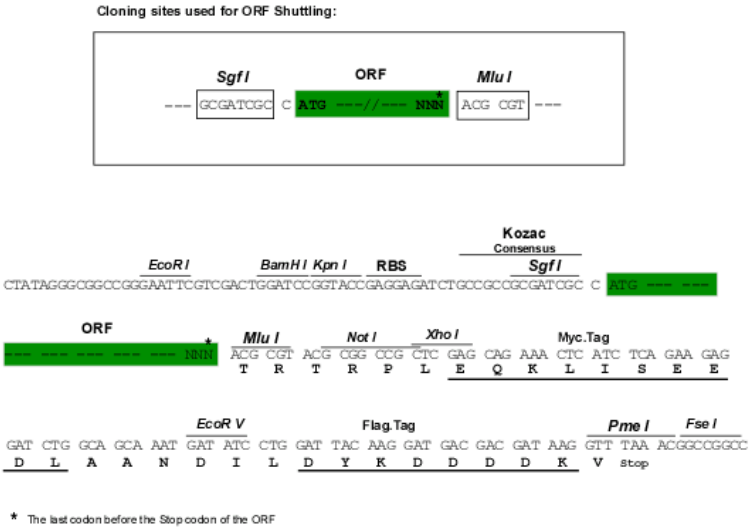
MGSYLSVPAYFTSRDLFRCSECQDSLTNWYYEKDGKLYCPKDYWGKFGEFCHGCSLLMTGPFMVAGEFKY
HPECFACMSCKVIIEDGDAYALVQHATLYCGKCHNEVVLAPMFERLSTESVQEQLPYSVTLISMPATTEG
RRGFSVSVESACSNYATTVQVKEVNRMHISPNNRNAIHPGDRILEINGTPVRTLRVEEVEDAISQTSQTL
QLLIEHDPVSQRLDQLRLEARLAPHMQNAGHPHALSTLDTKENLEGTLRRRSLRRSNSISKSPGPSSPKE
PLLFSRDISRSESLRCSSSYSQQIFRPCDLIHGEVLGKGFFGQAIKVTHKATGKVMVMKELIRCDEETQK
TFLTEVKVMRSLDHPNVLKFIGVLYKDKKLNLLTEYIEGGTLKDFLRSMDPFPWQQKVRFAKGIASGMAY
LHSMCIIHRDLNSHNCLIKLDKTVVVADFGLSRLIVEERKRAPMEKATTKKRTLRKNDRKKRYTVVGNPY
WMAPEMLNGKSYDETVDIFSFGIVLCEIIGQVYADPDCLPRTLDFGLNVKLFWEKFVPTDCPPAFFPLAA
ICCRLEPESRPAFSKLEDSFEALSLYLGELGIPLPAELEELDHTVSMQYGLTRDSPP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6488_d10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_016733

ORF Size: 1851 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.

RefSeq: NM_016733.1

RefSeq Size: 3848 bp

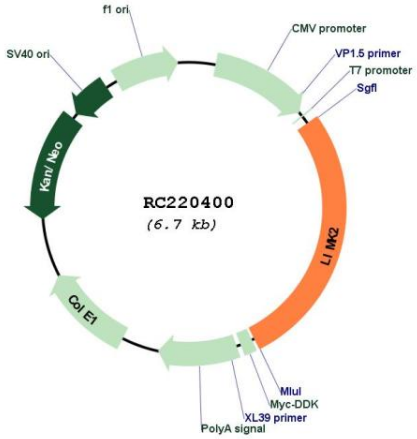
RefSeq ORF: 1854 bp

Locus ID: 3985

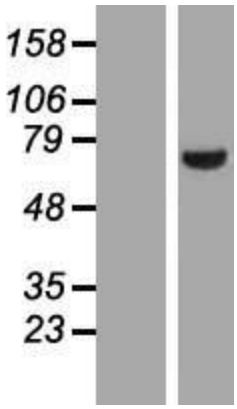
UniProt ID: P53671

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:	69.7 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]

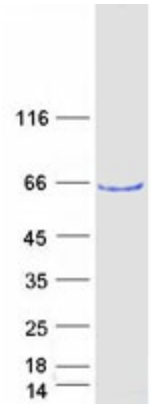
Product images:



Circular map for RC220400



Western blot validation of overexpression lysate (Cat# [LY413829]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220400 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified LIMK2 protein (Cat# [TP320400]). The protein was produced from HEK293T cells transfected with LIMK2 cDNA clone (Cat# RC220400) using MegaTran 2.0 (Cat# [TT210002]).