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Product datasheet for SC116659

LIM kinase 2 (LIMK2) (NM_005569) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LIM kinase 2 (LIMK2) (NM_005569) Human Untagged Clone
Tag:	Tag Free
Symbol:	LIM kinase 2
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

Fully Sequenced ORF:

>OriGene ORF sequence for NM_005569 edited
ATGTCCGCGCTGGCGGGTGAAGATGTCTGGAGGTGTCCAGGCTGTGGGGACCACATTGCT
CCAAGCCAGATATGGTACAGGACTGTCAACGAAACCTGGCACGGCTCTTGCTTCCGGTGT
TCAGAATGCCAGGATTCCCTCACCAACTGGTACTATGAGAAGGATGGGAAGCTCTACTGC
CCCAAGGACTACTGGGGGAAGTTTGGGGAGTTCTGTCATGGGTGCTCCCTGCTGATGACA
GGGCCTTTTATGGTGGCTGGGGAGTTCAAGTACCACCCAGAGTGCTTTGCCTGTATGAGC
TGCAAGGTGATCATTGAGGATGGGGATGCATATGCACTGGTGCAGCATGCCACCCTCTAC
TGTGGGAAGTGCCACAATGAGGTGGTGCTGGCACCCATGTTTGAGAGACTCTCCACAGAG
TCTGTTCAGGAGCAGCTGCCCTACTCTGTCACGCTCATCTCCATGCCGGCCACCACTGAA
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CAAGTGAAAGAGGTCAACCGGATGCACATCAGTCCCAACAATCGAAACGCCATCCACCCT
GGGGACCGCATCCTGGAGATCAATGGGACCCCCGTCCGCACACTTCGAGTGGAGGAGGTG
GAGGATGCAATTAGCCAGACGAGCCAGACACTTCAGCTGTTGATTGAACATGACCCCGTC
TCCCAACGCCTGGACCAGCTGCGGCTGGAGGCCCGGCTCGCTCCTCACATGCAGAATGCC
GGACACCCCCACGCCCTCAGCACCCTGGACACCAAGGAGAATCTGGAGGGGACACTGAGG
AGACGTTCCCTAAGGCGCAGTAACAGTATCTCCAAGTCCCCTGGCCCCAGCTCCCCAAAG
GAGCCCCTGCTGTTCAGCCGTGACATCAGCCGCTCAGAATCCCTTCGTTGTTCCAGCAGC
TATTCACAGCAGATCTTCCGGCCCTGTGACCTAATCCATGGGGAGGTCCTGGGGAAGGGC
TTCTTTGGGCAGGCTATCAAGGTGACACACAAAGCCACGGGCAAAGTGATGGTCATGAAA
GAGTTAATTCGATGTGATGAGGAGACCCAGAAAACTTTTCTGACTGAGGTGAAAGTGATG
CGCAGCCTGGACCACCCCAATGTGCTCAAGTTCATTGGTGTGCTGTACAAGGATAAGAAG
CTGAACCTGCTGACAGAGTACATTGAGGGGGGCACACTGAAGGACTTTCTGCGCAGTATG
GATCCGTTCCCCTGGCAGCAGAAGGTCAGGTTTGCCAAAGGAATCGCCTCCGGAATGGCC
TATTTGCACTCTATGTGCATCATCCACCGGGATCTGAACTCGCACAACTGCCTCATCAAG
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AAGCTTTTCTGGGAGAAGTTTGTTCCCACAGATTGTCCCCCGGCCTTCTTCCCGCTGGCC
GCCATCTGCTGCAGACTGGAGCCTGAGAGCAGACCAGCATTCTCGAAATTGGAGGACTCC
TTTGAGGCCCTCTCCCTGTACCTGGGGGAGCTGGGCATCCCGCTGCCTGCAGAGCTGGAG
GAGTTGGACCACACTGTGAGCATGCAGTACGGCCTGACCCGGGACTCACCTCCCTAG

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_005569 unedited
GTTCNCATTTGTATACGACTCCTATAGGGCGGCCGCGAATTCGCACGAGGGAACTAAGGG
AGCTGCTGTGTCCCCCGCCTCCTCCTCCCCATTTCCGCGCTCCCGGGACCATGTCCGCGC
TGGCGGGTGAAGATGTCTGGAGGTGTCCAGGCTGTGGGGACCACATTGCTCCAAGCCAGA
TATGGTACAGGACTGTCAACGAAACCTGGCACGGCTCTTGCTTCCGGTGTTCAGAATGCC
AGGATTCCCTCACCAACTGGTACTATGAGAAGGATGGGAAGCTCTACTGCCCCAAGGACT
ACTGGGGGAAGTTTGGGGAGTTCTGTCATGGGTGCTCCCTGCTGATGACAGGGCCTTTTA
TGGTGGCTGGGGAGTTCAAGTACCACCCAGAGTGCTTTGCCTGTATGAGCTGCAAGGTGA
TCATTGAGGATGGGGATGCATATGCACTGGTGCAGCATGCCACCCTCTACTGTGGGAAGT
GCCACAATGAGGTGGTGCTGGCACCCATGTTTGAGAGACTCTCCACAGAGTCTGTTCAGG
AGCAGCTGCCCTACTCTGTCACGCTCATCTCCATGCCGGCCACCACTGAAGGCAGGCGGG
GCTTCTCCGTGTCCGTGGAGAGTGCCTGCTCCAACTACGCCACCACTGTGCAAGTGAAAG
AGGTCAACCGGATGCACATCAGTCCCAACAATCGAAACGCCATCCACCCTTGGGACCGCA
TCCTGGAGATCAATGGGACCCCCGTCCGCACACTTCNAGTGGANGAGGTGNGAGATGCAA
TTAGCCAGACGAGCCAGACACTNTCAGCTGTGATTGAACATGACCCCGTCTCCAACGCCT
GGACCAGCTGCGGCTGGNAGCCCNGCTCGCTNCTCACATGCAGAAATGCCGACACCCNCA
CGCCCTCAGCACCCTGGACACAAGN

3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_005569 unedited
NTTTTACTCTGGACCCGCGGCCGCAATCTAGNGATCGGTTTTTTTTTTTTTTTTTTTATG
TTAACTGCTTAATTTATTTAGTCTGATCAATGGCCCAGTTCAGGCCCACCACTCCTACAC
TTGCTGGGGACAGCCAGGAAACAACCAGCCACACAATGCTGAACTGTGCTGCTGCTGGGA
GTCCAGGGCTCAGCCCTAAAGCAAGCTTGCAAACTTCACACATAAGTACAGTCTATATAG
CAAGTAAACTCTGACCAGAGATGACATCTGGTCCCACAACTCATCAGGTCTATGTACAAT
ATTTCACATACCACCCAATAGATAAGATAATATTAACAGCAACCACTCTCCTTTATCAAT
TCCCCCTGCTCCAATACAACCACCACACATTGCATTAATACCCCAAACCCATTCCCAATT
TATTAAATATGGTGCAAGCTCATAGACACTTAGAAGAGGCAAATCTAGTTGTGATGAAGA
GTTCCTAGAGCTCTGGGAGCCAAGATGGAGGTTCCCCAGTACCTGCACATGTGGCTCAGG
AGGATGCTGCCCAGGAGCTAATGAGTCGGGAGAGCAAACATGGGAGGTAGAAGTCAAATG
GCCCAGCTCAGGGAGCTATCTCTCTCAGCATATCAGGTTTGAGACTCTGCCGACACCTGT
TTCCAGCCCAAGCTGCTGCCTAAACCAACACTGCTGCAAGGTGACCCGTGGTTGCCTGAA
TTCCTGACCACAGATGCTGGGACCCCCGCTGCGCCCGCTGAAACACCAGCGCCGCAACGA
CCCCCGTGGCTCGTAGATCGCTGCACTTCCTCCAGACGTATCGAGCCGCCCGTACAGCCC
GCGCCCCGACTGAACGATCCACCGACTATCCGCCTCTGTTAAGGCCCACCCCTTTAGAGA
CGAGACCAGGACGGCAG
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Restriction Sites: NotI-NotI

ACCN: NM_005569

Insert Size: 4690 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_005569.3, NP_005560.1

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

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] Transcript Variant: This variant (2a) differs in the 5' UTR and coding region as well as the 3' UTR and coding region, compared to variant 1. The resulting isoform (2a) is shorter and has distinct N- and C-termini compared to isoform 1.