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Product datasheet for SC127711

LIM kinase 2 (LIMK2) (NM_016733) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	LIM kinase 2 (LIMK2) (NM_016733) 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 within SC127711 sequence for NM_016733 edited (data generated by NextGen Sequencing)

ATGGGGAGTTACTTGTCAGTCCCGGCTTACTTCACCTCCAGAGACCTGTTTCGGTGTTCA
GAATGCCAGGATTCCCTCACCAACTGGTACTATGAGAAGGATGGGAAGCTCTACTGCCCC
AAGGACTACTGGGGGAAGTTTGGGGAGTTCTGTCATGGGTGCTCCCTGCTGATGACAGGG
CCTTTTATGGTGGCTGGGGAGTTCAAGTACCACCCAGAGTGCTTTGCCTGTATGAGCTGC
AAGGTGATCATTGAGGATGGGGATGCATATGCACTGGTGCAGCATGCCACCCTCTACTGT
GGGAAGTGCCACAATGAGGTGGTGCTGGCACCCATGTTTGAGAGACTCTCCACAGAGTCT
GTTCAGGAGCAGCTGCCCTACTCTGTCACGCTCATCTCCATGCCGGCCACCACTGAAGGC
AGGCGGGGCTTCTCCGTGTCCGTGGAGAGTGCCTGCTCCAACTACGCCACCACTGTGCAA
GTGAAAGAGGTCAACCGGATGCACATCAGTCCCAACAATCGAAACGCCATCCACCCTGGG
GACCGCATCCTGGAGATCAATGGGACCCCCGTCCGCACACTTCGAGTGGAGGAGGTGGAG
GATGCAATTAGCCAGACGAGCCAGACACTTCAGCTGTTGATTGAACATGACCCCGTCTCC
CAACGCCTGGACCAGCTGCGGCTGGAGGCCCGGCTCGCTCCTCACATGCAGAATGCCGGA
CACCCCCACGCCCTCAGCACCCTGGACACCAAGGAGAATCTGGAGGGGACACTGAGGAGA
CGTTCCCTAAGGCGCAGTAACAGTATCTCCAAGTCCCCTGGCCCCAGCTCCCCAAAGGAG
CCCCTGCTGTTCAGCCGTGACATCAGCCGCTCAGAATCCCTTCGTTGTTCCAGCAGCTAT
TCACAGCAGATCTTCCGGCCCTGTGACCTAATCCATGGGGAGGTCCTGGGGAAGGGCTTC
TTTGGGCAGGCTATCAAGGTGACACACAAAGCCACGGGCAAAGTGATGGTCATGAAAGAG
TTAATTCGATGTGATGAGGAGACCCAGAAAACTTTTCTGACTGAGGTGAAAGTGATGCGC
AGCCTGGACCACCCCAATGTGCTCAAGTTCATTGGTGTGCTGTACAAGGATAAGAAGCTG
AACCTCCTGACAGAGTACATTGAGGGGGGCACACTGAAGGACTTTCTGCGCAGTATGGAT
CCGTTCCCCTGGCAGCAGAAGGTCAGGTTTGCCAAAGGAATCGCCTCCGGAATGGCCTAT
TTGCACTCTATGTGCATCATCCACCGGGATCTGAACTCGCACAACTGCCTCATCAAGTTG
GACAAGACTGTGGTGGTGGCAGACTTTGGGCTGTCACGGCTCATAGTGGAAGAGAGGAAA
AGGGCCCCCATGGAGAAGGCCACCACCAAGAAACGCACCTTGCGCAAGAACGACCGCAAG
AAGCGCTACACGGTGGTGGGAAACCCCTACTGGATGGCCCCTGAGATGCTGAACGGAAAG
AGCTATGATGAGACGGTGGATATCTTCTCCTTTGGGATCGTTCTCTGTGAGATCATTGGG
CAGGTGTATGCAGATCCTGACTGCCTTCCCCGAACACTGGACTTTGGCCTCAACGTGAAG
CTTTTCTGGGAGAAGTTTGTTCCCACAGATTGTCCCCCGGCCTTCTTCCCGCTGGCCGCC
ATCTGCTGCAGACTGGAGCCTGAGAGCAGACCAGCATTCTCGAAATTGGAGGACTCCTTT
GAGGCCCTCTCCCTGTACCTGGGGGAGCTGGGCATCCCGCTGCCTGCAGAGCTGGAGGAG
TTGGACCACACTGTGAGCATGCAGTACGGCCTGACCCGGGACTCACCTCCCTAG

Clone variation with respect to NM_016733.2

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_016733 unedited

AGAGGTGAGCTCAGGGCAGCCTGCCTGCAGCCAGAGGTGCCGGGAGCCCCGGGCCTGTCA
TGGTGGCCATCTACAGCCGGCCTGAGGCAGTCACAGACGGATTTGCAGCTGAGCCTGTCT
ATCTGGTGTGGGAAGAAGATGGGGAGTTACTTGTCAGTCCCGGCTTACTTCACCTCCAGA
GACCTGGTTTCGGTGTTCAGAATGCCAGGATTCCCTCACCAACTGGTACTATGAGAAGGA
TGGGAAGCTCTACTGCCCCAAGGACTACTGGGGGGAAGTTTGGGGAGTTCTGTCATGGGT
GCTCCCTGCTGATGACAGGGCCTTTTATGGTGGCTGGGGAGTTCAAGTACCACCCAGAGT
GCTTTGCCTGTATGAGCTGCGAGGTGATCATTGAGGATGGGGATGCATATGCACTGGTGC
AGGATGCCACCCTGTACTGTGGGAAGTGCGCCATGCAGGTGCCGCTCGTCGCCGTGCTGG
CGGGACTGTGGGGGGTGGCGGGGGGGGGGCGGGGGGGCGGTGGTGTGGGAGGCTGGTGGC
GGTCNCCCTCTCCCTTCTTTTGTTATACACTCTTTCCTCTTTTGTCTCCCTCCTACCGCC
CCCTCCGCCCGGTTTCGTGGGCGCTCGTTTGTCCGGTGCGGGGGTGCGCCTGCCTCCTGC
TCGCTCCCGTCTCGCCGAGTCGTTCCGCCCCGTCTCCTTGTCCTCCTTCCCTGCGCCCCG
CCCGCCCGCCCTTGTTTCTTGCCCTCGCTGCAGGCCCCCCTCGCCTTCGCCCGGCGAAGG
CTGCTACCACACCGCG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_016733 unedited
CTCCCTGTTTTCACAACCCCCCCACTACCCCCCCCACCNNGTCGCGGGCCCACTGACTTC
ATATTTTTTNAGTNCTGNANCAATGGGNNCCCAGTTCAGGGNCCCACCACTCCTACACTN
NTGCTGGGGNNACAGCCAGGNAAACAACCAGCCACACAATGCTGAACTGTGCTGCTGCTG
GGAGTCCAGGGCTCAGCCCTAAAGCAAGCTTGCAAACTTCACACATAAGTACAGTCTATA
TAGCAAGTAAACTCTGACCAGAGATGACATCTGGTCCCACAACTCATCAGGTCTATGTAC
AATATTTCACATACCACCCAATAGATAAGATAATATTAACAGCAACCACTCTCCTTTATC
AATTCCCCCTGCTCCAATACAACCACCACACATTGCATTAATACCCCAAACCCATTCCCA
ATTTATTAAATATGGTGCAAGCTCATAGACACTAAGAAGAGGCAAATCTAGTTGTGATGA
AGAGTTCCTAGAGCTCTGGGAGCCAAGATGGAGGTTTTCCAGTACCTGCACATGTGGCTC
AGGAGGATGCTGCCCAGGAGCTAATGAGTCCGGAGAGCAAACATGGGAGGTAGAAGTCAT
AAGGCCCAGTTCAGGCAGCTAATTCTCTCATCATTTCTACTTGGAGACTTTGACACCACC
TCTTGCGCATACCAAACTGCTGCCTAAACCAATCATGCTGAAGGGTGAATATTTGCTTGT
CACGCAACCCCTTACCAAGAAAATGCTGGCGCTCCCACTTCCTTGCCTTAAACTTCTAGC
CCGTCACCAGCCACCCTGTTTTTCATAAACCTATTGCTCCCGCACGCAAATATTTTCAGC
ATTCTCACCCAAGGACTCCCCTCCACTTTTATTACATAAAGCCAATATCTGCGCTCCCTA
CAGCCTGGCTCTATTTTAACCCCCCGACCCTCCTCTGCCTCTCATACGCCCATGCAGTAA
CTAAGCATTTCTTTCCTCCTCCCCCCCAGTATTCACCCCCCCTTACTAACCCACG

Restriction Sites: NotI-NotI

ACCN: NM_016733

Insert Size: 4130 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_016733.2, NP_057952.1

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

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 (2b) differs in the 3' UTR and coding region compared to variant 1. The resulting isoform (2b) is shorter and has a distinct C-terminus compared to isoform 1.