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Product datasheet for SC323590

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:

>NCBI ORF sequence for NM_005569, the custom clone sequence may differ by one or more nucleotides

ATGTCCGCGCTGGCGGGTGAAGATGTCTGGAGGTGTCCAGGCTGTGGGGACCACATTGCTCCAAGCCAGA
TATGGTACAGGACTGTCAACGAAACCTGGCACGGCTCTTGCTTCCGGTGTTCAGAATGCCAGGATTCCCT
CACCAACTGGTACTATGAGAAGGATGGGAAGCTCTACTGCCCCAAGGACTACTGGGGGAAGTTTGGGGAG
TTCTGTCATGGGTGCTCCCTGCTGATGACAGGGCCTTTTATGGTGGCTGGGGAGTTCAAGTACCACCCAG
AGTGCTTTGCCTGTATGAGCTGCAAGGTGATCATTGAGGATGGGGATGCATATGCACTGGTGCAGCATGC
CACCCTCTACTGTGGGAAGTGCCACAATGAGGTGGTGCTGGCACCCATGTTTGAGAGACTCTCCACAGAG
TCTGTTCAGGAGCAGCTGCCCTACTCTGTCACGCTCATCTCCATGCCGGCCACCACTGAAGGCAGGCGGG
GCTTCTCCGTGTCCGTGGAGAGTGCCTGCTCCAACTACGCCACCACTGTGCAAGTGAAAGAGGTCAACCG
GATGCACATCAGTCCCAACAATCGAAACGCCATCCACCCTGGGGACCGCATCCTGGAGATCAATGGGACC
CCCGTCCGCACACTTCGAGTGGAGGAGGTGGAGGATGCAATTAGCCAGACGAGCCAGACACTTCAGCTGT
TGATTGAACATGACCCCGTCTCCCAACGCCTGGACCAGCTGCGGCTGGAGGCCCGGCTCGCTCCTCACAT
GCAGAATGCCGGACACCCCCACGCCCTCAGCACCCTGGACACCAAGGAGAATCTGGAGGGGACACTGAGG
AGACGTTCCCTAAGGCGCAGTAACAGTATCTCCAAGTCCCCTGGCCCCAGCTCCCCAAAGGAGCCCCTGC
TGTTCAGCCGTGACATCAGCCGCTCAGAATCCCTTCGTTGTTCCAGCAGCTATTCACAGCAGATCTTCCG
GCCCTGTGACCTAATCCATGGGGAGGTCCTGGGGAAGGGCTTCTTTGGGCAGGCTATCAAGGTGACACAC
AAAGCCACGGGCAAAGTGATGGTCATGAAAGAGTTAATTCGATGTGATGAGGAGACCCAGAAAACTTTTC
TGACTGAGGTGAAAGTGATGCGCAGCCTGGACCACCCCAATGTGCTCAAGTTCATTGGTGTGCTGTACAA
GGATAAGAAGCTGAACCTCCTGACAGAGTACATTGAGGGGGGCACACTGAAGGACTTTCTGCGCAGTATG
GATCCGTTCCCCTGGCAGCAGAAGGTCAGGTTTGCCAAAGGAATCGCCTCCGGAATGGCCTATTTGCACT
CTATGTGCATCATCCACCGGGATCTGAACTCGCACAACTGCCTCATCAAGTTGGACAAGACTGTGGTGGT
GGCAGACTTTGGGCTGTCACGGCTCATAGTGGAAGAGAGGAAAAGGGCCCCCATGGAGAAGGCCACCACC
AAGAAACGCACCTTGCGCAAGAACGACCGCAAGAAGCGCTACACGGTGGTGGGAAACCCCTACTGGATGG
CCCCTGAGATGCTGAACGGAAAGAGCTATGATGAGACGGTGGATATCTTCTCCTTTGGGATCGTTCTCTG
TGAGATCATTGGGCAGGTGTATGCAGATCCTGACTGCCTTCCCCGAACACTGGACTTTGGCCTCAACGTG
AAGCTTTTCTGGGAGAAGTTTGTTCCCACAGATTGTCCCCCGGCCTTCTTCCCGCTGGCCGCCATCTGCT
GCAGACTGGAGCCTGAGAGCAGACCAGCATTCTCGAAATTGGAGGACTCCTTTGAGGCCCTCTCCCTGTA
CCTGGGGGAGCTGGGCATCCCGCTGCCTGCAGAGCTGGAGGAGTTGGACCACACTGTGAGCATGCAGTAC
GGCCTGACCCGGGACTCACCTCCCTAG

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_005569 unedited
ACCGCCCGTATCAGCAATGGGCGGTAGGCGCTGTACGGATGGGAGGTCTATATAAGCAGAGCTCGTTTAG
TGAACCGTCAGAATCTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGGAACTAAGGG
GAGCTGCTGTGTCCCCCGCCTCCTCCTCCCCATTTCCGCGCTCCCGGGACCATGTCCGCGCTGGCGGGTG
AAGATGTCTGGAGGTGTCCAGGCTGTGGGGACCACATTGCTCCAAGCCAGATATGGTACAGGACTGTCAA
CGAAACCTGGCACGGCTCTTGCTTCCGGTGTTCAGAATGCCAGGATTCCCTCACCAACTGGTACTATGAG
AAGATGGGAAGGCTTCTTACTTGCCCCCAAGGACACTACCTGGGGGAAGAGTTTTGGGGATTCTCGTTCA
TGGTTGCTCCCTGGCTGATGAACAAGGCCCCTTTTAATGGGGCCTGGGGGAGTTCAATTCCCACCCCAAA
TTGCTTTTGCTTGGTTTAACCCTGCAGGGGGATTCTTTGGGAATGGGGAAAGCCATTTCCCTGGGTCCCC
CTGTCCCCCCCCTCAATTGGGGGAAATGTGCCAAAGGGGGGGGGGCCGGGCCCCCATTTTTTGAAAAAA
CTCCCCAAAAAATTTTTTTCAGGAACCTGTCCCCCTATTTTTGCCCCCTTATTCTTGTCGGGGCCCACCA
TAAAAGGGGGGGGGGGGTTTTTCCCGTTTTCCGGGGAAAGAGGTGTTTTTAAAATAACGACAATTGGGGC
AATAAAAAAAAGCACCCCGGGAGTCCCCGATCCCCCAAAATAAAAAACCCCCCCCCCCCTGGGGCACCCT
CCTCCGGAAATTATGGGGGGCACTTCTTCGCTTTTTTTGTGTGGAGGGTGGGGGAAGACCTTTTCACCCA
AAGCCCAAATATTCTCTGTTGTGAGAATAATAGCACCTCTCCCAACCCGTAGCAACATGGCATCGTAAGC
GCGCGGTTCTCTATGTCTGTAATAATGACTACCACTCCACCCTCTTCTCTCGCGTGCACGACGAGAATAT

Kinase Domain Sequence:	>SC323590 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation TKAYTTCTGCTGTGACTATCCATGGGGAGGTCCTGGGGAAGGGCTTCTTTGGGCAGGCTATCAAGGTGAC ACACAAAGCCACGGGCAAAGTGATGGTCATGATGGAGTTAATTCGATGTGATGAGGAGACCCAGAAAACT TTTCTGACTGAGGTGAAAGTGATGCGCAGCCTGGACCACCCCAATGTGCTCAAGTTCATTGGTGTGCTGT ACAAGGATAAGAAGCTGAACCTGCTGACAGAGTACATTGAGGGGG
Restriction Sites:	Please inquire
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).
OTI Annotation:	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell. 2008 May p536-548.
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.