

Product datasheet for **SC323417**

MARK2 (NM_017490) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MARK2 (NM_017490) Human Untagged Clone
Tag:	Tag Free
Symbol:	MARK2
Synonyms:	EMK-1; EMK1; PAR-1; Par-1b; Par1b
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC323417 sequence for NM_017490 edited (data generated by NextGen Sequencing)

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ATGATTCGGGGCCGCAACTCAGCCACCTCTGCTGATGAGCAGCCCCACATTGGAACTAC
CGGCTCCTCAAGACCATTGGCAAGGGTAATTTTGGCAAGGTGAAGTTGGCCCCGACACATC
CTGACTGGGAAAGAGGTAGCTGTGATGATCATTGACAAGACTCAACTGAACTCCTCCAGC
CTCCAGAAACTATTCCGCGAAGTAAGAATAATGAAGGTTTTGAATCATCCCAACATAGTT
AAATTATTTGAAGTGATTGAGACTGAGAAAACGCTCTACCTTGTGCATGGAGTACGCTAGT
GGCGGAGAGGTATTTGATTACCTAGTGGCTCATGGCAGGATGAAAGAAAAAGAGGCTCGA
GCCAAATTCCGCCAGATAGTGTCTGCTGTGCACTACTGTCAACAGAAAGTTTATTGTCCAT
AGAGACTTAAAGGCAGAAAACCTGCTCTTGGATGCTGATATGAACATCAAGATTGCAGAC
TTTGGCTTCAGCAATGAATTCACCTTTGGGAACAAGCTGGACACCTTCTGTGGCAGTCCC
CCTTATGTGCCCCAGAACTCTCCAGGGCAAAAAATATGATGGACCCGAGGTGGATGTG
TGGAGCCTAGGAGTTATCCTCTATACACTGGTCAGCGGATCCCTGCCTTTTGTGGACAG
AACCTCAAGGAGCTGCGGAACGGGTAAGGGGAAAAATACCGTATTCCATTCTACATG
TCCACGGACTGTGAAAACCTGCTTAAGAAATTTCTCATTCTTAATCCAGCAAGAGAGGC
ACTTTAGAGCAAATCATGAAAGATCGATGGATGAATGTGGGTACGGAAGATGATGAACTA
AAGCCTTACGTGGAGCCACTCCCTGACTACAAGGACCCCCGGCGGACAGAGCTGATGGTG
TCCATGGGTTATACACGGGAAGAGATCCAGGACTCGCTGGTGGGCCAGAGATACAACGAG
GTGATGGCCACCTATCTGCTCCTGGGCTACAAGAGCTCCGAGCTGGAAGGCGACACCATC
ACCCTGAAACCCCGGCCTTACGTGATCTGACCAATAGCAGCGCCCCATCCCCATCCCAC
AAGGTACAGCGCAGCGTGTGGCCAATCCCAAGCAGCGGCGCTTACGCGACCAGGCTGGT
CCTGCCATTCCCACCTTAATTTACTCTAAGAAGACTCAGAGTAACAACGCAGAAAAT
AAGCGCCTGAGGAGACCGGGAGTCAGGGCGGAAAGCCAGCAGCACAGCCAAGGTGCCT
GCCAGCCCCCTGCCCGGTCTGGAGAGGAAGAAGACCACCCCAACCCCTCCACGAACAGC
GTCCTCTCCACCAGCACAAATCGAAGCAGGAATCCCCACTTTTGGAGCGGGCCAGCCTC
GGCCAGGCCTCCATCCAGAATGGCAAAGACAGCCTAACCATGCCAGGGTCCCGGGCTCC
ACGGCTTCTGCTTCTGCCGAGTCTCTGCGGCCCGGCCCGCCAGCACCAGAAATCCATG
TCGGCCTCCGTGCACCCCAACAAGGCCTCTGGGCTGCCCCCACGGAGAGTAACTGTGAG
GTGCCGCGGCCAGCACAGCCCCCAGCGTGTCCCTGTTGCCTCCCCATCCGCCACAAC
ATCAGCAGCAGTGGTGGAGCCCCAGACCGAACTAACTTCCCCGGGGTGTGTCCAGCCGA
AGCACCTTCCATGCTGGGAGCTCCGACAGGTGCGGGACCAGCAGAATTTGCCCTACGGT
GTGACCCAGCCTCTCCCTCTGGCCACAGCCAGGCGCGGGGGGCCTCTGGGAGCATC
TTCAGCAAGTTACCTCCAAGTTTGTACGCAGRAAYCTGAATGAACCTGAAAGCAAAGAC
CGAGTGGAGACGCTCAGACCTCAGTGGTGGGCACTGGCGGCAACGACAAAGAAAAGGAA
GAATTTGGGAGGCCAAGCCCCGCTCCCTCCGTTACAGTGGAGTATGAAGACTACGAGC
TCCATGGAGCCCAACGAGATGATGCGGGAGATCCGCAAGGTGCTGGACGCGAACAGCTGC
CAGAGCGAGCTGCATGAGAAGTACATGCTGCTGTGCATGCACGGCACGCCGGGCCACGAG
GACTTCGTGCAGTGGGAGATGGAGGTGTGCAAACCTGCCGCGCTCTCTCTCAACGGGGTT
CGATTTAAGCGGATATCGGGCACCTCCATGGCCTTCAAAAACATTGCCTCCAAAATAGCC
AACGAGCTGAAGCTTTAA
    
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Clone variation with respect to NM_017490.3
 146 a=>t;1833 g=>r;1836 c=>y;1974 c=>t

5' Read Nucleotide Sequence:	>OriGene 5' read for mutant NM_017490 unedited ACCGCCCGTTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGA ACCGTCAGAAATTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCTGAACGAGAGGG ACACGGAGCAGCCACCTTGGGACACCTTGACTCCAAGCCAGCAGTAAGTCCAACATGATTCGGGGCCG CAACTCAGCCACCTCTGCTGATGAGCAGCCCCACATTGAAACTACCGGCTCCTCAAGACCATTGGCAAG GGTAATTTTGCCAAGGTGAAGTTGGCCCCACACATCCTGACTGGGAAAGAGGTAGCTGTGATGATCATTG ACAAGACTCAACTGAACTCCTCCAGCCTCCAGAAACTATTTCCGCGAAGTAAGAAATAATGAAGGTTTTG ATTCATCCCCACCATAGTTAATTTGAGTGATTGAAACTGAGAAAACGCTCTACTTGTATGGAGTAC GCTAGTGCGGGAGAGTATTTGAATACTAGGTGCCAATGGCAGGTGAAGAAAAAAGGCTGAGCAAATCCG GCCGGATGGTGTGCGTTGGAATTCTGTCCAGAGTTAATGGCATTAGAGCTTAAGGAGAAAACTGCTTTG GTGCTGATGAACTCAGATGCGAACTTGGTTAGAATGGATTCCCTTGAAAGCGGAACCTTCTGGATCCC CTAAGCGCGCCGAACCTTCAGGCAAATATGGACCAGTGAGTGTGGACTAGTATCCTTACCTGTACGGATC TCGCTTGAGACGACTAAGCTCGACGACTAAGGAATCGATCTTCATGTCGCGTGACCGTGAGTCTCTAACCC GGGA
Kinase Domain Sequence:	>SC323417 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation CCTGMGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCA GAATTTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCGGCCATGGCTCACCTCCGG GGATTTGCCAACCAGCACTCTCGAGTGGACCCTGAGGAGCTCTTACCAAGCTCGACCGCATTGGCAAGG GCTCGTTTGGGGAGGTCTACAAGGCATCGATAACCACACAAAGG
Restriction Sites:	Please inquire
ACCN:	NM_017490
Insert Size:	2700 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:	<ol style="list-style-type: none">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_017490.1 , NP_059672.1
RefSeq Size:	2946 bp

RefSeq ORF: 2238 bp

Locus ID: 2011

UniProt ID: [Q7KZ17](#)

Cytogenetics: 11q13.1

Domains: UBA, pkinase, KA1

Protein Families: Druggable Genome, Protein Kinase

Gene Summary: This gene encodes a member of the Par-1 family of serine/threonine protein kinases. The protein is an important regulator of cell polarity in epithelial and neuronal cells, and also controls the stability of microtubules through phosphorylation and inactivation of several microtubule-associating proteins. The protein localizes to cell membranes. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2009]

Transcript Variant: This variant (1) represents use of an alternate promoter and 5' UTR, uses a downstream start codon, lacks an in-frame exon, and uses an alternate in-frame splice site, compared to variant 4. The resulting isoform (a) has a shorter N-terminus and lacks an internal segment and 1 internal residue, compared to isoform d. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.