

## Product datasheet for **SC318279**

### **MARK1 (NM\_018650) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MARK1 (NM_018650) Human Untagged Clone
Tag:	Tag Free
Symbol:	MARK1
Synonyms:	MARK; Par-1c; Par1c
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:**

>OriGene sequence for NM\_018650 edited  
 CAGCGCCGGGCAACCGCCTCGCCGAAGCCCTCCCTCGTTACTGTCCGCATACCCCGGG  
 GCGCCGCGCGGGGAAGCGGCTCCCCCTCCTTCTCCTCCGCGTCTCTTCCCTCTTTCC  
 CGCCGGGGCCGCTTGTTCACCGCCCGCGGCCTGCGGGAGCCGCTCGCCCCGGCCTTGT  
 GCTCGCGTCCGCACCCCTTTCTGTGCCCCCGGGGCCCGCACACAGCCCGCCGGCG  
 AGACCCCGGCCAGACCCCGCTGCCCGCACAAAATGTGCGCCCGGACGCCATTGCCGACGG  
 TGAACGAGCGGGACACGGAAAATCATACATCTGTGGATGGATATACTGAACCACACATCC  
 AGCCTACCAAGTCGAGTAGCAGACAGAACATCCCCGGGTAGAAAATCCATTACGTCAG  
 CAACAGATGAACAGCCTCACATTGGAATTACCGTTTACAAAAACAATAGGGAAGGGAA  
 ATTTTGCAAAAGTCAAATTGGCAAGACAGTCTAACTGGTAGAGAGTTGCTGTGAAAA  
 TAATAGACAAAATCAGCTAAATCCTACCAGTCTACAAAAGTTATTTGAGAAAGTACGAA  
 TAATGAAGATACTGAATCATCCTAATATAGTAAAATTGTTTGAAGTTATTGAAACAGAGA  
 AGACTCTCTATTTAGTCATGGAATACGCGAGTGGGGTGAAGTATTTGATTACTTAGTTG  
 CCCATGGAAGAATGAAAGAGAAAAGAGGCCCGTGCAAAAATTTAGGCAGATTGTATCTGCTG  
 TACAGTATTGTCATCAAAAGTACATTGTTACCGTGATCTTAAGGCTGAAAACCTTCTCC  
 TTGATGGTGATATGAATATTAATAATTGCTGACTTTGGTTTTAGTAAATGAATTTACAGTTG  
 GGAACAAATTGGACACATTTTGTGGAAGCCACCCATGCTGCTCCCGAGCTTTTCCAAG  
 GAAAGAAGTATGATGGGCTGAAGTGGATGTGTGGAGTCTGGGCGTCATTCTCTATACAT  
 TAGTCAGTGGCTCCTTGCCCTTCGATGGCCAGAAATTAAGGAACTGCGAGAGCGAGTTT  
 TACGAGGGAAGTACCGTATTCCTTCTATATGTCCACAGACTGTGAAAATCTTCTGAAGA  
 AATTATTAGTCTGAATCCAATAAAGAGAGGCAGCTTGGAAACAAATGAAAGATCGAT  
 GGATGAATGTTGGTCATGAAGAGGAAGAACTAAAGCCATATACTGAGCCTGATCCGGATT  
 TCAATGACACAAAAGAATAGACATTATGGTCACCATGGGCTTTGCACGAGATGAAATAA  
 ATGATGCCTTAATAAATCAGAAGTATGATGAAGTTATGGCTACTTATATTCTTCTAGGTA  
 GAAAACCACTGAATTTGAAGTGGTGAATCGTTATCCAGTGAAACTTGTGTCAGAGGT  
 CCCGGCCAGTAGTACTTAAACAACAGCACTCTTCAAGTCCCCTGCTCACCTGAAGGTCC  
 AGAGAAGTATCTCAGCAATCAGAAGCAGCGGCTTTCAGTGATCATGCTGGTCCATCCA  
 TTCCTCTGCTGATCATATACAAAAGACCTCAGGCTAACAGTGTGGAAGTGAACAGA  
 AAGAGGAGTGGGACAAAGATGTGGCTCGAAAATTTGGCAGCACACAGTGGATCAAAAA  
 GCGAGATGACTGCAAGCCCTCTGTAGGGCCAGAGAGGAAAAAATCTTCAACTATCCAA  
 GTAACAATGTGTATTCTGGAGGTAGCATGGCAAGAAGGAATACATATGTCTGTGAAAGGA  
 CCACAGATCGATACGTAGCATTGCAGAATGGAAAAGACAGCAGCCTTACGGAGATGTCTG  
 TGAGTAGCATATCTTCTGCAAGGCTTCTGTGGCCTCTGCTGTCCCCTCAGCACGACCCC  
 GCCACCAGAAGTCCATGTCCACTTCTGGTCACTCTATAAAGTCAACTGCCAACCATTA  
 AAGACGGCTCTGAAGCTTACCGGCTGGTACAACCCAGAGAGTGCCTGTCTTCCCAT  
 CTGCTCACAGTATTAGTACTGCGACTCCAGACCGGACCCGTTTTCCCGAGGGAGCTCAA  
 GCCGAAGCACTTCCATGGTGAACAGCTCCGGGAGCGACGCAGCGTTGCTTATAATGGGC  
 CACCTGCTTACCATCCATGAAACGGGTGCATTTGCACATGCCAGAAGGGGAACGTCAA  
 CTGGTATAATAAGCAAAATCACATCCAAATTTGTTGCGAGGGATCCAAGTGAAGCGAAG  
 CCAGTGGCAGAACCAGACCTCAAGAAGTACATCAGGGGAACCAAAAGAAAGAGACAAGG  
 AAGAGGGTAAAGATTCTAAGCCGCTTCTTTGCGGTTACATGGAGTATGAAGACCACTA  
 GTTCAATGGACCCTAATGACATGATGAGAGAAATCCGAAAAGTGTAGATGCAAATAACT  
 GTGATTATGAGCAAAAAGAGAGATTTTTGCTTTTCTGTGCCATGGAGACGCTAGACAGG  
 ATAGCCTCGTGCAGTGGGAGATGGAAGTCTGCAAGTTGCCACGACTGTCCTTAATGGGG  
 TTCGTTCAAGCGAATATCTGGGACATCTATTGCCTTTAAGAACATTGCATCAAAAATAG  
 CAAATGAGCTTAAGCTGTAAGAAGTCCAAATTTACAGGTTACAGGAAGATACATACATA  
 TATGAGGTACAGTTTTTGAATGTACTGGTAATGCCTAATGTGGTCTGCCTGTGAATCTCC  
 CCATGTAGAATTTGCCCTAATGCAATAAGGTTATACATAGTTATGAACTGTAATAATTA  
 AGTCAGTATGAACTATAATAAATATCTGTAGCTTAAAAAGTAGGTTACATGTACAGGTA  
 AGTATATTGTGATTTCTGTTTCTTTCTGTTTCTAGAGTTGTATAATAAACATGATTG  
 CTTAAAAACTTGTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_018650
<b>Insert Size:</b>	3000 bp
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_018650.3</a> , <a href="#">NP_061120.3</a>
<b>RefSeq Size:</b>	5293 bp
<b>RefSeq ORF:</b>	2388 bp
<b>Locus ID:</b>	4139
<b>UniProt ID:</b>	<a href="#">Q9P0L2</a>
<b>Cytogenetics:</b>	1q41
<b>Domains:</b>	UBA, pkinase, TyrKc, KA1, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase

**Gene Summary:**

Serine/threonine-protein kinase (PubMed:23666762). Involved in cell polarity and microtubule dynamics regulation. Phosphorylates DCX, MAP2 and MAP4. Phosphorylates the microtubule-associated protein MAPT/TAU (PubMed:23666762). Involved in cell polarity by phosphorylating the microtubule-associated proteins MAP2, MAP4 and MAPT/TAU at KXGS motifs, causing detachment from microtubules, and their disassembly. Involved in the regulation of neuronal migration through its dual activities in regulating cellular polarity and microtubule dynamics, possibly by phosphorylating and regulating DCX. Also acts as a positive regulator of the Wnt signaling pathway, probably by mediating phosphorylation of dishevelled proteins (DVL1, DVL2 and/or DVL3).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (2) uses an alternate in-frame splice site compared to variant 1. The encoded isoform (2) is shorter than isoform 1. 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.