

## Product datasheet for **RC239587**

### **MARK1 (NM\_001286124) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MARK1 (NM_001286124) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MARK1
Synonyms:	MARK; Par-1c; Par1c
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide  
Sequence:**

>RC239587 representing NM\_001286124  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTCGGCCCGGACGCCATTGCCGACGGTGAACGAGCGGGACACGGAAAAATCATACATCTGTGGATGGAT  
 ATACTGAACCACACATCCAGCCTACCAAGTCGAGTAGCAGACAGAACATCCCCCGGTGTAGAACTCCAT  
 TACGTCAGCAACAGATGAACAGCCTCACATTGGAATTACCGTTTACAAAAACAATAGGGAAGGGAAAT  
 TTTGCCAAAGTCAAATTGGCAAGACACGTTCTAACTGGTAGAGAGTTGCTGTGAAAATAATAGACAAAA  
 CTCAGCTAAATCCTACCAGTCTACAAAAGTTATTTGAGAAGTACGAATAATGAAGATACTGAATCATCC  
 TAATATAGTAAAATTGTTTGAAGTTATTGAAACAGAGAAGACTCTCTATTTAGTCATGGAATACGCGAGT  
 GGGGGTGAAGTATTTGATTACTTAGTTGCCATGGAAGAATGAAAGAGAAAGAGGCCCGTCAAAATTTA  
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 CCTTCTCCTTGATGGTGATATGAATATTTAAAATTGCTGACTTTGGTTTTAGTAATGAATTTACAGTTGGG  
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 CGTTTCAGTGATCATGCTGGTCCATCCATTCTCCTGCTGTATCATATACAAAAAGACCTCAGGCTAACA  
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 TTAAGCTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC239587 representing NM\_001286124  
 Red=Cloning site Green=Tags(s)

```
MSARTPLPTVNERDTENHTSVDGYTEPHIQPTKSSSRQNIIPRCRNSITSATDEQPHIGNYRLQKTIGKGN
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RFS DHAGPSIPPAVS YTKRPQANSVESEQKEEWDKDVARKLGSTTVGSKSEMTASPLVGPERRKSSSTIPS
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PIKVTLP TIKDGSEAYRPGSTTQRVPAASPSAHSI STATPDRTRFPRGSSSRSTFHGEQLRERRSVAYNG
PPASP SHETGAF AHARRGTSTGIISKITSKFVRRDPSEGEASGRDTSRSTSGEPKRDKEEGKDSKPRS
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```

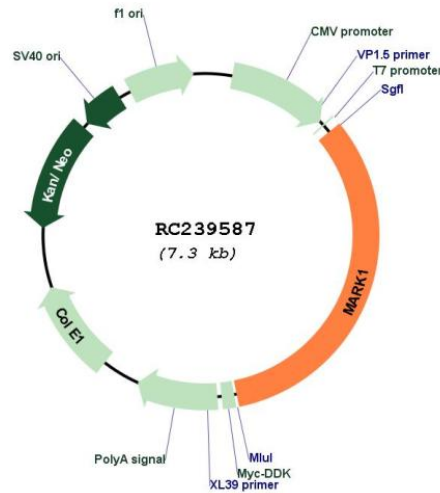
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfi-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_001286124

**ORF Size:** 2388 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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\\_001286124.1](#), [NP\\_001273053.1](#)

**RefSeq Size:** 5339 bp

**RefSeq ORF:** 2391 bp

**Locus ID:** 4139

**Cytogenetics:** 1q41

**Protein Families:** Druggable Genome, Protein Kinase

**MW:** 89.5 kDa

**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]