

## Product datasheet for **RG228553**

### MARK2 (NM\_001163296) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MARK2 (NM_001163296) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MARK2
Synonyms:	EMK-1; EMK1; PAR-1; Par-1b; Par1b
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG228553 representing NM\_001163296  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTCCAGCGCTCGGACCCCTACCCAGCTGAACGAGAGGGACACGGAGCAGCCACCTTGGGACACC  
 TTGACTCCAAGCCAGCAGTAAGTCCAACATGATTCGGGGCCGCAACTCAGCCACCTCTGCTGATGAGCA  
 GCCCACATTGGAACTACCGGCTCCTCAAGACATTGGCAAGGGTAATTTTCCAAAGGTGAAGTTGGCC  
 CGACACATCTGACTGGGAAAGAGGTAGCTGTGAAGATCATTGACAAGACTCAACTGAACTCTCCAGCC  
 TCCAGAACTATTCGCGAAGTAAGAATAATGAAGTTTTGAATCATCCCAACATAGTTAAATTATTTGA  
 AGTGATTGAGACTGAGAAAACGCTCTACCTTGTTCATGGAGTACGCTAGTGGCGGAGAGGTATTTGATTAC  
 CTAGTGGCTCATGGCAGGATGAAAGAAAAGAGGCTCGAGCCAAATTCGCCAGATAGTGTCTGCTGTGC  
 AGTACTGTACCAGAAGTTTATTGTCCATAGAGACTTAAAGGCAGAAAACCTGCTCTTGATGCTGATAT  
 GAACATCAAGATTGCAGACTTTGGCTTCAGCAATGAATCACCTTTGGGAACAAGCTGGACACCTTCTGT  
 GGCAGTCCCCCTTATGCTGCCCAAGAACTTCCAGGGCAAAAAATATGATGGACCCGAGGTGGATGTGT  
 GGAGCCTAGGAGTTATCCTCTATACACTGGTCAGCGGATCCCTGCCTTTTATGAGGACAGAACCTCAAGGA  
 GCTGCGGGAACGGGTAAGTGGGGAAAATACCGTATTCCATTCTACATGTCCACGGACTGTGAAAACCTG  
 CTTAAGAAATTTCTATTCTTAATCCCAGCAAGAGAGGCACTTTAGAGCAAAATCATGAAAGATCGATGGA  
 TGAATGTGGGTACGAAGATGATGAACTAAAGCCTTACGTGGAGCCACTCCCTGACTACAAGGACCCCGG  
 GCGGACAGAGCTGATGGTGTCCATGGGTATACACGGGAAGAGATCCAGGACTCGCTGGTGGGCCAGAGA  
 TACAACGAGGTGATGGCCACCTATCTGCTCCTGGGCTACAAGAGCTCCGAGCTGGAAGGGCAGACCATCA  
 CCCTGAAACCCCGGCCTTCAGCTGATCTGACCAATAGCAGCGCCCATCCCCATCCCAAGGTACAGCG  
 CAGCGTGTGCGCCAATCCCAAGCAGCGGCGCTTCAGCGACCAGGCAGCTGGTCTGCCATTCCACCTCT  
 AATTTCTACTCTAAGAAGACTCAGAGTAACAACGCAGAAAATAAGCGGCCTGAGGAGGACCGGGAGTCAG  
 GGCGAAAAGCCAGCAGCACAGCCAAGGTGCCTGCCAGCCCTGCCCGGTCTGGAGAGGAAGAAGACCAC  
 CCCAACCCCTCCACGAACAGCGTCTCTCCACCAGCACAATCGAAGCAGGAATCCCCACTTTTGGAG  
 CGGGCCAGCCTCGGCCAGGCTCCATCCAGAATGGCAAAGACAGCACAGCCCCCAGCGTGTCCCTGTTG  
 CCTCCCCATCCGCCACAACATCAGCAGCAGTGGTGGAGCCCCAGACCGAACTAATTTCCCCGGGGTGT  
 GTCCAGCCGAAGCACCTCCATGCTGGCAGCTCCGACAGGTGCGGGACCAGCAGAAATTTGCCCTACGGT  
 GTGACCCAGCCTCTCCCTCTGGCCACAGCCAGGCGCGGGGGCCTCTGGGAGCATCTTCAGCAAGT  
 TCACCTCAAGTTTGTACGCAGAAATCTGTCTTTCAGGTTTGCCAGAAGACCTCACGTGGTGGGCAGTGG  
 CGCAACGACAAAAGAAAAGGAAGATTTGCGGAGGCCAAGCCCCGCTCCCTCCGCTTCACGTGGAGTATG  
 AAGACCAGAGCTCCATGGAGCCCAACGAGATGATGCGGGAGATCCGCAAGGTGCTGGACGCGAACAGCT  
 GCCAGAGCGAGCTGCATGAGAAGTACATGCTGCTGTGCATGCACGGCACGCCGGGCCACGAGGACTTCGT  
 GCAGTGGGAGATGGAGGTGTGCAAACCTGCCGCGCTCTCTCAACGGGGTTCGATTTAAGCGGATATCG  
 GGCACCTCCATGGCCTTCAAAAACATTGCCCTCAAAAATAGCCAACGAGCTGAAGCTT

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >RG228553 representing NM\_001163296  
 Red=Cloning site Green=Tags(s)

MSSARTPLPTLNERDTEQPTLGHLDSPSSKSNMIRGRNSATSADEQPHIGNYRLLKKTIGKGNFAKVKLA  
 RHILTGKEVAVKIIDKTQLNSSLQKLFREVRIMKVLNHPNIVKLFVIEITEKTLVMEYASGGVEFDY  
 LVAHGRMKEKEARAKFRQIVSAVQYCHQKFIVHRDLKAENLLDADMNIKIADFGFSNEFTFGNKLDTFC  
 GSPPYAAPELFGQKKYDGPVDVWSLGVILYTLVSGSLPFDGQNLKELRERVLRGKYRIPFYMSTDCENL  
 LKKFLILNPSKRGTLEQIMKDRWMNVGHEDDELKPYVEPLPDYKDPRTLMVSMGYTREEIQDSLVGQR  
 YNEVMATYLLLGYSSELEGDTITLKPRPSADLTNSSAPSPSHKVQRSVSANPKQRRFSDQAAGPAIPT  
 NSYSKKTQSNNAENKRPEEDRESGRKASSTAKVPASPLPGLERKKTTPSTNSVLSTSTNRSRNSPLLE  
 RASLGQASIQNGKDSTAPQRPVAVSPSAHNISSSGGAPDRTNFPRGVSSRSTFHAGQLRQVRDQNLPGY  
 VTPASPSGHSQGRRGASGSIFSFTSKFVRRNLSFRFARRPHVVGSGNDKEEFREAKPRSLRFTWSM  
 KTTSSMEPNEMREIRKVLANSQCSELHEKYMLLCMHGTPGHEDFVQWEMEVCKLPRLSLNGVRFKRIS  
 GTSMAFKNIASKIANELKL

TRTRPLE - GFP Tag - V

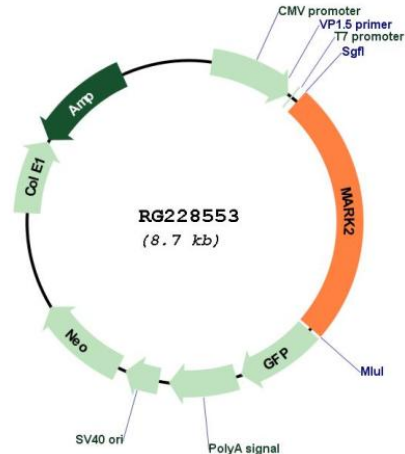
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



## Plasmid Map:



ACCN: NM\_001163296

ORF Size: 2157 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\\_001163296.2](#)

RefSeq Size: 4541 bp

RefSeq ORF: 2160 bp

**Locus ID:** 2011

**UniProt ID:** [Q7KZ17](#)

**Cytogenetics:** 11q13.1

**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]