

Product datasheet for **MR227306**

Mark2 (NM_001080390) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mark2 (NM_001080390) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mark2
Synonyms:	Emk; EMK-1; Par-1; Par-1b
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide
Sequence:**

>MR227306 representing NM_001080390
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCTGCGGGGCCCACTCAGCCACCTCTGCTGACGAGCAGCCCATATTGGCAACTACCGGCTCCTTA
 AGACCATTGGCAAGGGTAACTTTGCCAAGGTGAAGTTGGCCCGGCACATCCTGACGGGAAAGAGGTAGC
 TGTGAAGATCATCGACAAGCCAGCTGAACTCCTCCAGCCTACAGAACTGTTCCGAGAAGTAAGAATA
 ATGAAGGTTTTGAATCATCCCAACATAGTTAAGTTGTTTGAAGTGATCGAGACTGAGAAGACTCTCTACC
 TTGTGATGGAGTATGCCAGTGGCGGAGAGGTGTTTGATTACCTAGTGGCCATGGCAGGATGAAAGAAAA
 AGAAGCTCGAGCCAAATTCGCCAGATAGTGTCTGCTGTGCAGTACTGTCACCAGAAGTTCATTGTTTAT
 AGAGATCTAAAGGCAGAAAACCTGCTCCTGGATGCTGATGAACATCAAGATTGCAGACTTTGGCTTTA
 GCAACGAATTCACCTTTGGGAACAAGCTGGATACTTTCTGTGGCAGTCTCCTTATGCTGCCCCAGA
 ACTTTCCAGGGCAAAAAGTATGATGGTCTGAGGTGGATGTCTGGAGCCTGGGAGTATCCTCTATACACTG
 GTCAGCGGATCCCTGCCTTTTGTGACAGAACCTCAAGGAGCTGCGGGAACGGGTACTGAGGGGAAAT
 ACCGTATTCGGTCTACATGTCCACGGACTGTGAAAATCTGCTTAAGAAATTTCTCATACTTAATCCTAG
 TAAGAGAGGCACTTTAGAGCAAATTATGAAAGATCGGTGGATGAACGTGGGGCATGAGGACGATGAGCTA
 AAGCCTTATGTGGAACCTCTCCCTGACTACAAGGACCCCGGCGGACAGAGTTGATGGTGTCAATGGGTT
 ACACACGGGAAGAGATCCAGGACTCGTGGTAGGCCAGAGGTACAACGAAGTGTGGCTACCTATCTGCT
 CTTGGCTACAAGAGCTCTGAGCTGGAAGGTGATACCATCACTTTGAAGCCCCGGCCTCAGCTGATCTA
 ACCAACAGCAGTGCCTCATCCATCCCACAAGGTTAGCGCAGCGTCTCTGCCAACCCCAAGCAACGAC
 GCTCCAGTGACCAGGCCCTCCCTGCCATTCCACCTCGAATTCCTACTTAAGAAGACTCAGAGTAACAA
 CGCAGAAAATAAGCGGCCCTGAGGAAGAGACAGGGCGGAAAGCCAGCAGCACCCGCCAAAGTGCCTGCCAGC
 CCTCTGCCTGGCCTGGACAGGAAGAAGACCACTCTGCCCTCCACGAACAGCGTCTTTCCACCAGCA
 CAAACCGAAGCAGGAACCTCCCACTTTTGGACAGGGCCAGCCTTGCCAGGCCTCCATCCAGAATGGTAA
 AGACAGCCTAACCATGCCAGGGTCCCGGGCTCCACGGCTTCTGCTTCTGCCGCAGTCTCTGCGGCCGG
 CCCCAGCAGCAGAAATCCATGTCTGCCTCCGTACACCCCAACAAGGCCTCTGGGTTGCCCCACGG
 AGAGTAACTGTGAGGTGCCTCGGCCAGCAGCCCCCAGCGCTCCCTGTGCTCCTCCCTCCGCCCA
 CAACATCAGCAGCAGTAGTGGAGCCCAGACCGAACTAATTTCCACGGGTGTGTCCAGTGAAGCACC
 TTCCATGTGGCAGCTCCGACAGTGGGGACCAGCAGAACTACCTACGGTGTGACCCAGCCTCTC
 CCTCTGGCCATAGCCAGGGCCGGCGGGGGCTCTGGCAGCATCTCAGCAAGTTCACCTCCAAGTTTGT
 CCGCAGGAACCTGAATGAACCTGAAAGCAAGACCGAGTGGAGACGCTCAGACCTCACGTGGTAGGCAGT
 GGAGGCACTGACAAGGACAAGGAGGAGTTTCGGGAGGCCAAGCCTCGCTCCCTGCGCTTACCTGGAGCA
 TGAAGACCACGAGCTCTATGGAGCCCAATGAGATGATGCGGGAGATCCGCAAGGTGCTGGACGCCAACAG
 CTGCCAAAGCGAGCTGCACGAGCGGTACATGCTACTGTGCGTGATGGCACACCAGGCCACGAGAATTT
 GTGCAGTGGGAGATGGAGGTGTGCAAACTGCCCGGCTGTCTCTCAACGGTGTTCGGTTAAGCGGATAT
 CGGGCACTTCCATGGCCTTCAAAAACATTGCCTCAAAAATAGCCAATGAGCTGAAGCTT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATGAGTTTAA

Protein Sequence: >MR227306 representing NM_001080390
 Red=Cloning site Green=Tags(s)

```
MLRGRNSATSADQPHIGNYRLLKTIGKGNFAKVKLARHILTGKEVAVKIIDKTQLNSSLQKLFREVRI
MKVLNHPNIVKLFVETETKLYLVMYASGGVDFDYLVAHGRMKEKEARAKFRQIVSAVYCHQKFIH
RDLKAENLLLDADMNIKIADFGFSNEFTFGNKLDTFCGSPPYAAPELFGKKYDGPEDVWVSLGVILYTL
VSGSLPFDGQNLKELRERVLRGKYRIPFYMSTDCENLLKKFLILNPSKRGTLTLEQIMKDRWMNVGHEDDEL
KPYVEPLPDYKDRRTELMVSMGYTREEIQDSL VGQRYNEVMATYLLLGYSSELEGDTITLKPRPSADL
TNSSAPSPSHKVQRSVSNPKQRRSSDQAVPAIPTSNSYSKKTQSNNANRPEEETGRKASSTAKVPAS
PLPGLDRKKTTPAPSTNSVLSTSTNRSRNSPLLDRASLGQASIQNGKDSLTPGSRASASAAVSAAR
PRQHQSMSASVHPNKASGLPPTESNCEVPRPSTAPQRPVAVSPSAHNISSSSGAPDRTNFPRGVSSRST
FHAGQLRQVRDQNLPGVTPASPSGHSQGRGASGSIFSKFTSKFVRRNLNEPEKDRVETLRPHVVG
GGTDKDEEFREAKPRSLRFTWSMKTTSSMEPNEMMREIRKVL DANSCQSELHERYMLLCVHGTPGHENF
VQWEMEVECKLPRLSLNGVRFKRISGTSMAFKNIASKIANELKL
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1257_c03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001080390

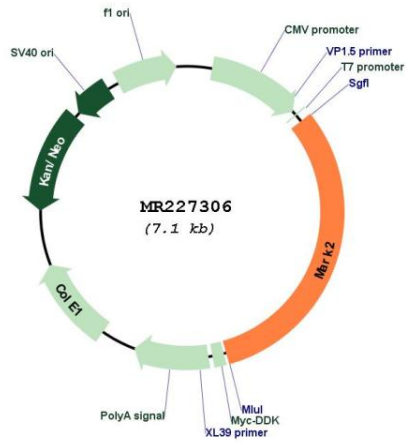
ORF Size: 2229 bp

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:	<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_001080390.2
RefSeq Size:	4371 bp
RefSeq ORF:	2232 bp
Locus ID:	13728
UniProt ID:	Q05512
Cytogenetics:	19 5.32 cM
MW:	83.2 kDa
Gene Summary:	<p>Serine/threonine-protein kinase. Involved in cell polarity and microtubule dynamics regulation. Phosphorylates CRTC2/TORC2, DCX, HDAC7, KIF13B, MAP2, MAP4 and RAB11FIP2. Phosphorylates the microtubule-associated protein MAPT/TAU. Plays a key role in cell polarity by phosphorylating the microtubule-associated proteins MAP2, MAP4 and MAPT/TAU at KXGS motifs, causing detachment from microtubules, and their disassembly. Regulates epithelial cell polarity by phosphorylating RAB11FIP2. Involved in the regulation of neuronal migration through its dual activities in regulating cellular polarity and microtubule dynamics, possibly by phosphorylating and regulating DCX. Regulates axogenesis by phosphorylating KIF13B, promoting interaction between KIF13B and 14-3-3 and inhibiting microtubule-dependent accumulation of KIF13B. Also required for neurite outgrowth and establishment of neuronal polarity. Regulates localization and activity of some histone deacetylases by mediating phosphorylation of HDAC7, promoting subsequent interaction between HDAC7 and 14-3-3 and export from the nucleus. Also acts as a positive regulator of the Wnt signaling pathway, probably by mediating phosphorylation of dishevelled proteins (DVL1, DVL2 and/or DVL3). Modulates the developmental decision to build a columnar versus a hepatic epithelial cell apparently by promoting a switch from a direct to a transcytotic mode of apical protein delivery. Essential for the asymmetric development of membrane domains of polarized epithelial cells.[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR227306