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Product datasheet for MC204604

Mark2 (NM_001080388) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mark2 (NM_001080388) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Mark2
Synonyms:	Emk; EMK-1; Par-1; Par-1b
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

>BC058556
CAGAGCCGAACCTCGGTCTTCGGAATCTAGGAGGTGCGCGCGTCCCCGGGGATTACCTTCTTCGGTAGTT
TCCGGAATTCACCCATCGTCTGGGCCGAGAGGAAAAGGCTCTTCCCCCTCCCGTTCCTAGTTGTTTCGGA
TGTTTCCGGCTCTTGCCGGCGGAAAGAGCCGAGGGCTGGCGGTGGTGGCGGCCATGTTGGGAGCAGCAGG
TCCGGCGGCGGCTGCCTGTGTGTCGGGCGCGGAGCAGTGCGGCTGAGGGCAGGGGAGGAGCGAGGCAGGC
GGCCGGCTGCGGCGGTTGAGAGTAGGCGGAGCGGCGCGGCCGGGCCGAAAGGCGGCACAACCCAGCCGGG
GGTCGGGGGGGGGTGCGGTCCGGAGCCGCTCGGAGCCGGCGAGGCCTAGCCCGAGCGGTGCATCACCGGG
CTGGCGTGAGCCATCGCCCGGCCTCCCCGCACCCCCGGCCGGGGCCCATGCAGCGGGTGCTCCTGCTGTG
AGAAGCCCCGCCCGGCCGGGCTCCTAGCCTTCCCTTCCCTATCTTCCTCCAAGCTTCTCCATTCCCTCCC
CTGAGATACCGGCGCCATGTCCAGCGCTCGGACCCCCCTACCCACGCTGAACGAAAGGGACACGGAGCAG
CCCACCTTGGGACACCTTGATTCCAAGCCCAGCAGTAAGTCCAACATGCTGCGGGGCCGCAACTCAGCCA
CCTCTGCTGACGAGCAGCCCCATATTGGCAACTACCGGCTCCTTAAGACCATTGGCAAGGGTAACTTTGC
CAAGGTGAAGTTGGCCCGGCACATCCTGACGGGGAAAGAGGTAGCTGTGAAGATCATCGACAAGACCCAG
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TCCTGGATGCTGATATGAACATCAAGATTGCAGACTTTGGCTTTAGCAACGAATTCACCTTTGGGAACAA
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CCTGAGGTGGATGTCTGGAGCCTGGGAGTCATCCTCTATACACTGGTCAGCGGATCCCTGCCTTTTGATG
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GCTGGTAGGCCAGAGGTACAACGAAGTGATGGCTACCTATCTGCTCCTTGGCTACAAGAGCTCTGAGCTG
GAAGGTGATACCATCACTTTGAAGCCCCGGCCTTCAGCTGATCTAACCAACAGCAGTGCCCCATCTCCAT
CCCACAAGGTTCAGCGCAGCGTCTCTGCCAACCCCAAGCAACGACGCTCCAGTGACCAGGCCGTCCCTGC
CATTCCCACCTCGAATTCCTACTCTAAGAAGACTCAGAGTAACAACGCAGAAAATAAGCGGCCTGAGGAA
GAGACAGGGCGGAAAGCCAGCAGCACCGCCAAAGTGCCTGCCAGCCCTCTGCCTGGCCTGGACAGGAAGA
AGACCACTCCTGCCCCCTCCACGAACAGCGTCCTTTCCACCAGCACAAACCGAAGCAGGAACTCCCCACT
TTTGGACAGGGCCAGCCTTGGCCAGGCCTCCATCCAGAATGGTAAAGACAGCACAGCCCCCCAGCGCGTC
CCTGTCGCCTCCCCCTCCGCCCACAACATCAGCAGCAGTAGTGGAGCCCCAGACCGAACTAATTTCCCAC
GGGGTGTGTCCAGTCGAAGCACCTTCCATGCTGGGCAGCTCCGACAGGTGCGGGACCAGCAGAATCTACC
CTACGGTGTGACCCCAGCCTCTCCCTCTGGCCATAGCCAGGGCCGGCGGGGGGCCTCTGGCAGCATCTTC
AGCAAGTTCACCTCCAAGTTTGTCCGCAGGAACCTGAATGAACCTGAAAGCAAAGACCGAGTGGAGACGC
TCAGACCTCACGTGGTAGGCAGTGGAGGCACTGACAAGGACAAGGAGGAGTTTCGGGAGGCCAAGCCTCG
CTCCCTGCGCTTCACCTGGAGCATGAAGACCACGAGCTCTATGGAGCCCAATGAGATGATGCGGGAGATC
CGCAAGGTGCTGGACGCCAACAGCTGCCAAAGCGAGCTGCACGAGCGGTACATGCTACTGTGCGTGCATG
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CGGTGTTCGGTTTAAGCGGATATCGGGCACTTCCATGGCCTTCAAAAACATTGCCTCCAAAATAGCCAAT
GAGCTGAAGCTTTAACAGGCTGTCAGGAGGGGCAGCAGAGGCCCACCAGTGGACTTGGCTGCTTGGGCCA
ACCCTGCATCCCCCTGGGAGAAACTGCAGGATGAATTGGTGTGTCTCCCCTGCTGGCACTTGTCCCCTTC
CAGGCCCTTCTCAGTTTTTTTCTTCCATGTTTGTGGGGGATGGGAAGTGGTTCTTCTCCCTCCCACATTC
ACCCCTGCCCAGAAGTCCCTCCCTTCCCCCCTGCAGGAGGCAAAGGAAGGGGAGGGGGCTGGGGGGGGCA
GGGCTCCCCCTCGGTACTGCGGTTGCACAGAGTATTTCGCCTAAACCAAGAAAATTTTTATTCCCAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAA

Restriction Sites: RsrII-NotI

ACCN: NM_001080388

Insert Size: 2169 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).
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:	BC058556, AAH58556
RefSeq Size:	3106 bp
RefSeq ORF:	2169 bp
Locus ID:	13728
UniProt ID:	Q05512
Cytogenetics:	19 5.32 cM

Gene Summary: 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]
Transcript Variant: This variant (2) lacks an in-frame exon in the 3' coding region, compared to variant 1. The encoded isoform (2) is shorter, compared to 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.