

## Product datasheet for **MR227363**

### Mark3 (NM\_021516) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mark3 (NM_021516) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mark3
Synonyms:	1600015G02Rik; A430080F22Rik; C-TAK1; Emk2; ETK-1; ETK1; MPK10
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR227363 representing NM\_021516  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTCCACTAGGACCCCTTTGCCAACGGTGAATGAACGAGACACTGAAAACCACATTTACATGGAGACG  
 GGAGGCAAGAAGTCACCTCCCGCACCGGGCGCTCTGGAGCTCGGTGTAGAACTCAATAGCTTCTGTGC  
 AGATGAACAGCCTCACATCGGAACTACAGACTGTTGAAAAAATCGGCAAGGGAACTTTGCAAAAGTG  
 AAATTGGCGAGACACATCCTCACAGGCCGAGAGTTGCAATAAAAATAATTGACAAAACAGTTGAATC  
 CAACAAGTCTACAAAAGCTTTCAGAGAAGTAAGAATAATGAAGATTTTAAATCACCCAAACATAGTGAA  
 GTTGTTCGAAGTCATTGAAACGGAAAAACTCTCTACTTAATCATGGAATATGCAAGTGGAGGTGAAGTA  
 TTTGACTATTTGGTTGCACATGGAAGAATGAAGGAAAAAGAAGCAAGAGCTAAATTTAGACAGATTGTTT  
 CCGCAGTACAGTATTGCCACAAAACGGATTGTTACAGAGACCTCAAGGCTGAAAATCTGTTATTAGA  
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 ACGTTTTGTGGTGTCTCCATATGCAGCCCTGAGCTCTCCAGGGCAAGAAGTATGACGGGCCAGAAG  
 TCGACGTGTGGAGCCTCGGTGTCATTCTACACCCTAGTCAGTGGTTCGCTTCCCTTTGATGGTCAAAA  
 CCTGAAGGAAGTGAAGAGAGAGTACTCCGCGGGAAGTACAGAATCCCTTTCTACATGTCCACAGACTGC  
 GAGAACCTTCTCAAGCGCTTCTGGTGTGAACCCAGTTAAACGGGGCACTCTCGAGCAAATCATGAAGG  
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 AGACCAGAAGAGAATAGATATTAGTGGGAATGGGATATTCCCAAGAAGAAATCAAGAATCTCTTAGC  
 AAAATGAAATACGATGAAATCACAGTACTTACTTGTACTGGGAGGAAATCTGCAGAGCTGGACGCTA  
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 TGCCAGTCCCATGCTTGGGAATGCAGGCAATCCAATAAAGCCGATATCCCTGAGCGCAAGAAAAGCCCT  
 GCTGTGCCAGTAGTAACACAGCATCTGGTGGGATGACACGGCGGAACACTTACGTTTGCAGCGAGAGAT  
 GTGCAGCAGACAGACATTCTGTGATTGAGAACGGCAAAGAAAACAGCGCTATTCCAGATGAGAGAACTCC  
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 CGCAATGTGTCTTCAGAGCAGAAGGATGAGAACAGAGAGGCCAAGCCCGCTCCCTGCGCTTACCTGGA  
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 TAACTGCGACTACGAGCAGAGGGAGCGCTTCTGCTCTTCTGTGTCCATGGCGACGGGCACGCAGAGAAC  
 CTGGTACAGTGGGAAATGGAAGTCTGTAAGCTGCCAAGACTGTCTCTGAATGGAGTCCGGTTTAAGCGGA  
 TATCAGGGACATCCATAGCTTTCAAAAATATTGCTTCAAAAATTGCCAATGAGCTAAAGCTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
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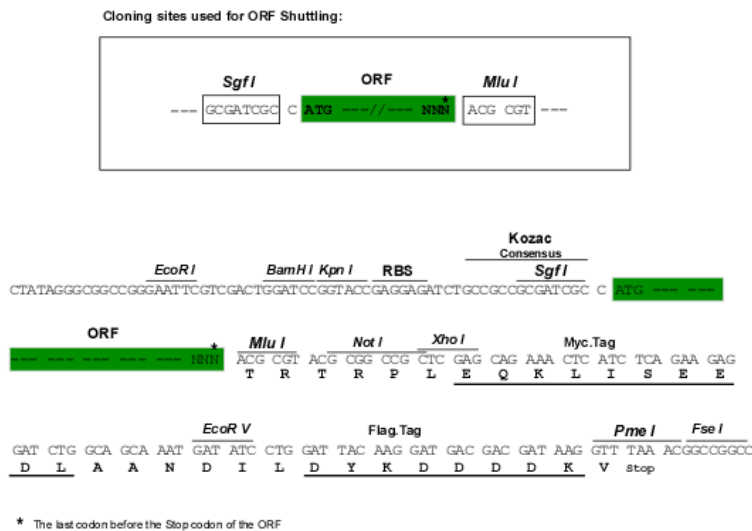
**Protein Sequence:** >MR227363 representing NM\_021516  
 Red=Cloning site Green=Tags(s)

MSTRTP LPTVNERDTENHISHGDRQEVTSRTGRSGARCRNSIASCADQPHIGNYRL LKTI GKNFAKV  
 KLARHILTGREVAIKIIDKTQLNPTSLQKLFREVRIMKILNHPNIVKLFVIEIETKTL YLIMEYASGGEV  
 FDYLV AHGRMKEKEARAKFRQIVSAVQYCHQKRIVHRDLKAENLLLDADMNIKIADFGFSNEFTVGSKLD  
 TFCGSPPYAAPEL FQGKKYDGP EVDVWSLGVILYTLVSGSLPFDGQNLKELRERVL RGYRIPFYMSTDC  
 ENLLKRFLV LNPVKRG TLEQIMKDRWINAGHEEDELKPFVEPELDI SDQKRIDIMVGMGYSQEEIQESLS  
 KMKYDEITATY LLLGRKSAELDASDSSSSNL SLAKVRPNSDLNSTGQSPHHKQR SVSSSQKQRRYS  
 HAGPAIPSVVAYPKRSQTSTADSDLKEDGIPSRKSSSSAVGGKIAPASPLGNAGNPNKADIPERKKSP  
 AVSSNTASGGMTRNTYVCSERCAADRHSVIQNGKNSAIPDERTPVASTHSISSATTPDRIRFPRGTA  
 SRSTFHGQPRERTATYNGPPASPSLSHEATPLSQTRSRGSTNLF SKLTSKLTRRLPTEYERNGRYEGSS  
 RNVSSSEQDENREAKPRSLRFTWSMKTSSMDPSDMMREIRKVL DANNC DYEQRERFLLCVHGDGHAEN  
 LVQWEMEVCKLPRLSLNGVRFKRISGTSIAFKNIASKIANELKL

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_021516

**ORF Size:** 2232 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\\_021516.4](#), [NP\\_067491.2](#)

**RefSeq Size:** 3388 bp

**RefSeq ORF:** 2235 bp

**Locus ID:** 17169

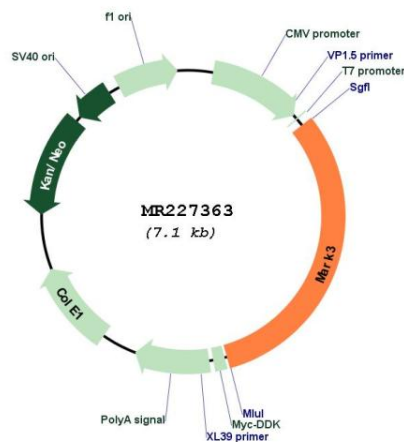
**UniProt ID:** [Q03141](#)

**Cytogenetics:** 12 F1

**MW:** 83.7 kDa

**Gene Summary:** Serine/threonine-protein kinase. Involved in the specific phosphorylation of microtubule-associated proteins for MAPT/TAU, MAP2 and MAP4. Phosphorylates CDC25C. 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. Negatively regulates the Hippo signaling pathway and antagonizes the phosphorylation of LATS1. Cooperates with DLG5 to inhibit the kinase activity of STK3/MST2 toward LATS1.[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR227363