

## Product datasheet for **MR231188**

### Mapk7 (NM\_001291034) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Mapk7 (NM_001291034) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mapk7
Synonyms:	BMK-1; BMK1; ERK-5; ERK5; Erk5-T; PRKM7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR231188 representing NM\_001291034  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCCGAACCGCTGAAGGAGGAGGACGGCGAAGATGGCTCTGGGGAGCCCCCTGGGAGGGTGAAGGCAG  
 AACCCGTTACACCGCTGCCTCTGTGGTGGCCAAGAACCCTGGCCCTGCTCAAAGCCCGCTCCTTCGACGT  
 GACCTTTGACGTGGGGGACGAGTACGAGATCATCGAGACCATAGGCAATGGGGCTACGGGGTGGTGTCT  
 TCGGGCGCGCCGCTCACGGGCCAGCAGGTGGCCATCAAGAAGATACCTAATGCTTTTGTGTGGTGA  
 CCAATGCCAAACGGACCCTCAGGGAGCTGAAGATCCTCAAACACTTCAAACACGACAATATCATGCCAT  
 CAAGGACATCCTGAAGCCTACTGTGCCCTATGGAGAATTCAGATCTGTCTATGTGGTACTGGACCTCATG  
 GAGAGCGACCTACACCAGATCATTCACTCTTACAGCCGCTCACCTGGAACATGTGAGATACTTCTGT  
 ACCAGTGTCTTCGGGGCCTCAAATACATGCACTCTGCTCAGGTATCCACCGTATCTTAAACCCTTAA  
 CCTTCTGGTCAATGAGAAGTGTGAGCTCAAGATCGGTGACTTTGGAATGGCCCGTGGCCTCTGTACTTCC  
 CCTGCCGAGCACCAGTACTTCATGACTGAGTATGTGGTACTCGCTGGTACCGTGGCCCGGAGCTCATGC  
 TTTCCCTGCACGAGTATACGCAGGCAATCGACCTCTGGTCTGTGGGCTGCATCTTTGGTGAAGTGTGGC  
 TCGGGCCAGCTCTCCAGGCAAAAACACTGTCACACAGTTACAGCTGATCATGATGGTGTGGGAACT  
 CCGTCACCAGCTGTGATTCAGGCTGTGGGGGCTGAAAGGGTGGCAGCCTATATCCAGAGCCTGCCACAA  
 GGCAACCTGTGCCTTGGGAGACAGTATACCCAGGTGTGACCGCCAGGCCCTCTCCCTGTGGGACGCAT  
 GTTGGGATTTGAACCCAGTGCCCGAATCTCAGCTGCTGCTGCCCTTCGCCACCCCTTCTGGCTAAGTAC  
 CATGACCCTGATGATGAGCCTGATTGCGCCCCACCTTTGACTTTGCTTTTGACCGTGAAGCCCTACCA  
 GGGAGCGCATTAAGGAGGCCATTGTGGCTGAGATTGAGGACTTCCATGCACGACGGGAGGGCATCCGCCA  
 ACAAAATCCGCTTCCAGCCTTCTCTGCAGCCTGTGGCTAGTGAGCCTGTGTGTCCAGATGTTGAGATGCC  
 AGTCCCTGGGCTCCAAGTGGAGACTGTGCCATGGAGTGCCTCCTCCAGCACTGCCACCATGCTCTGATC  
 CTGCACCTGACACCGTTGATCTGACTCTGCAGCCTGCCCGCGGCCAGTGAGCTTGTCCACAAAAAG  
 AGAGGGTGCCATCTCCGACAATACCAAAGCAGCCCTCAAAGTGCCTGCTCAAGTCCCTAAGGAGCAGG  
 CTCAGAGATGGGCCAGTGACCCCTGGAGGCGCCTGAGCCTCGAAAGCCCGTGCAGCTCAGGAACGCC  
 AGCGAGAACGAGAAGAGAAGCGCAGGAGGCGACAAGAGAGGCCAAGGAGCGGGAGAAGCGACGACAAGA  
 GAGAGAACGCAAGGAGAGGGGGGCTGGTACCTTGGGGGGCCCTCTACTGACCCTCTGGCTGGACTGGT  
 CTCAGTGACAATGACCGAAGCCTGCTAGAGCGGTGGACTCGCATGGCTAGGCCTCCTGCCCTGCCCTG  
 CCCAGCGCCAGCACCAGCGCCAGCACCCTCTGCCCAGCCCACTAGTACTCCTACTGCCCCGTATC  
 TCAGTCTACTGGTCTCTACAGCCTGCAGGCTCTATTCCGGGTCCTGCCTCCCAGCCTGTTTGCCACCC  
 CCTGGCCCTGTTCCCGAGCCTGTGGCCCTATCCCTGCTCCGCTCCAGACTGCCCTTCCACTAGCCTTT  
 TGGCCTCCAGTCACTTGTGCCACCTAGTGGGTGCCTGGTCTGGTGGCCAGAAAGTCTGCCTTACTT  
 CCCATCTGGCCACCACCTCCAGATCCTGGGCTCACCCCTCAGCCTTCTACATCAGAGTCACTGATGTC  
 AACCTGGTGAAGCAGCTGTCCAAGTCTCAGGTGGAGGACCCCTGCCTCCTGTGTTCTCTGGCACTC  
 CAAAGGGCAGTGGGGCTGGCTACGGAGTTGGCTTTGATCTGGAGGAATCTTAAATCAATCTTTTGAT  
 GGGTGTGGCTGATGGGCCACAGGATGGCCAGGCAGACTCAGCCTCACTCTCAGCCTCTCCTTGTGAC  
 TGGCTTAGGGCCATGGCATGAACCCTGTGACATTGAGTCTCTGCAGCGTGAAGTCCAGATGGACTCCC  
 CAATGCTGCTGTCTGACCTGCCTGACCTCCAAGAGCCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR231188 representing NM\_001291034  
 Red=Cloning site Green=Tags(s)

MAEPLKEEDGEDGSGEPPGRVKAEPVHTAASVVAKNLALLKARSDVTFDVGDEYEIIETIGNGAYGVVS  
 SARRRLTGQQVAIKKIPNAFDVVTNAKRTLRELKILKHFKHDNIIA IKDILKPTVPYGEFRSVYVLDLM  
 ESDLHQIIHSSQPLTLEHVRYFLYQLLRGLKYMHS AQVIHRDLKPSNLLVNENCKIGDFGMARGLCTS  
 PAEHQYFMTEYVATRWRAP ELM SLHEYTQAIDLWSVGCIFGEMLARRQLFPGKNYVHQLQLIMMVLGT  
 PSPAVIQAVGAERVRAIYIQLPPRQVPVWETVYPGADRQAL SLLGRMLRFEPSARISAAAALRHPFLAKY  
 HDPDDEPDCAPPFDFAFDREALTRERIKEAIVAEIEDFHARREGIRQQIRFQPSLQPVASEPVCPDVEMP  
 SPWAPSGDCAMESPPPALPPCSDPAPDTV DLTLPAPPASELAPPKREGAISDNTKAALKAALLKSLRSR  
 LRDGPSAPLEAPEPRKPVTAQERQREEREKRRRRQERAKERERKRRQERERKERGAGTLGGPSTDPLAGLV  
 LSDNDRSLLERWTRMARPPAPAPAPAPAPAPAPAPSSAQPTSTPTGPVVSQSTGQLPAGSIPGPASQPVCPP  
 PGPVPPQAGPIPAPLQTAPSTLLASQSLVPPSGLPGSGAPEVLPYFSPGPPPPDPGLTPQPSTSESPDV  
 NLVTQQLSKSQVEDPLPPVFSGTPKSGAGYGVGFDLEEF LNQSFDMGVADGPDQDQADSASLSASLLAD  
 WLEGHGMNPADIESLQREIQMDS PMLLSDLPDLQEP

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001291034

**ORF Size:** 2418 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\\_001291034.1](#), [NP\\_001277963.1](#)

**RefSeq Size:** 3124 bp

**RefSeq ORF:** 2421 bp

**Locus ID:** 23939

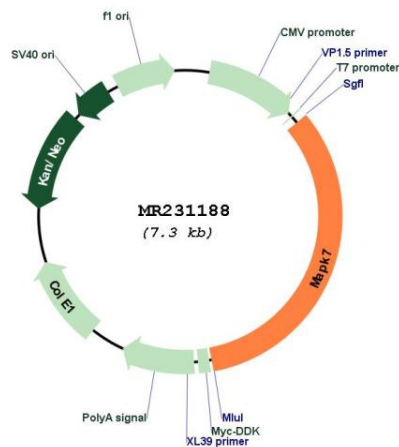
**UniProt ID:** [Q9WVS8](#)

**Cytogenetics:** 11 B2

**MW:** 87.7 kDa

**Gene Summary:** Plays a role in various cellular processes such as proliferation, differentiation and cell survival. The upstream activator of MAPK7 is the MAPK kinase MAP2K5. Upon activation, it translocates to the nucleus and phosphorylates various downstream targets including MEF2C. EGF activates MAPK7 through a Ras-independent and MAP2K5-dependent pathway. May have a role in muscle cell differentiation. May be important for endothelial function and maintenance of blood vessel integrity. MAP2K5 and MAPK7 interact specifically with one another and not with MEK1/ERK1 or MEK2/ERK2 pathways. Phosphorylates SGK1 at Ser-78 and this is required for growth factor-induced cell cycle progression (By similarity). Involved in the regulation of p53/TP53 by disrupting the PML-MDM2 interaction (By similarity). [UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR231188