

Product datasheet for **MR230831**

Mapk7 (NM_001291036) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Mapk7 (NM_001291036) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Mapk7
Synonyms:	BMK-1; BMK1; ERK-5; ERK5; Erk5-T; PRKM7
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide
Sequence:

>MR230831 representing NM_001291036
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGAGAGCGACCTACACCAGATCATTCACTCTTCACAGCCGCTCACCCCTGGAACATGTGAGATACTTCC
TGTAACAGCTGCTTCGGGGCCTCAAATACATGCACTCTGCTCAGGTCATCCACCGTGATCTTAAACCCCTC
TAACCTTCTGGTCAATGAGAAGTGTGAGCTCAAGATCGGTGACTTTGGAATGGCCCGTGGCCTCTGTA
TCCCTGCCGAGCACCAGTACTTCATGACTGAGTATGTGGCTACTCGTGGTACCGTGCCCGGAGCTCA
TGCTTTCCCTGCACGAGTACGCGAGGCAATCGACCTCTGGTCTGTGGGCTGCATCTTTGGTGTGAGTGT
GGCTCGGCCAGCTCTCCAGGCAAAAACACGTGCACCAAGTACAGCTGATCATGATGGTGTGGGA
ACTCCGTACCCAGCTGTGATTACGGCTGTGGGGCTGAAAGGGTGCAGCCTATATCCAGAGCCTGCCAC
CAAGGCAACCTGTGCCTGGGAGACAGTATACCCAGGTGCTGACCGCCAGGCCCTCTCCCTGCTGGGACG
CATGTTGGGATTGAACCCAGTGCCGAATCTCAGCTGCTGCTGCCCTTCGCCACCCCTTCTGGCTAAG
TACCATGACCCTGATGATGAGCCTGATTGCGCCCCACCTTTTGACTTTGCTTTTGACCGTGAAGCCCTTA
CCAGGGAGCGCATTAAAGGAGGCCATTGTGGCTGAGATTGAGGACTTCCATGCACGACGGGAGGGCATCCG
CCAACAAATCCGCTTCCAGCCTTCTCTGCAGCCTGTGGCTAGTGAGCCTGTGTGCCAGATGTTGAGATG
CCCAGTCCCTGGGCTCCAAGTGGAGACTGTGCCATGGAGTCGCTCCTCCAGCACTGCCACCATGCTCTG
ATCCTGCACCTGACACCGTTGATCTGACTCTGCAGCCTGCCCGCCGGCCAGTGAGCTTGTCCACAAA
AAGAGAGGGTGCCATCTCCGACAATACCAAGCAGCCCTCAAAGTGCCTGTCAAGTCCCTAAGGAGC
AGGCTCAGAGATGGGCCAGTGCACCTTGGAGGCGCTGAGCCTCGAAAGCCCGTGACAGCTCAGGAAC
GCCAGCGAGAACGAGAAGAGAAGCGCAGGAGGCGACAAGAGAGAGCCAAGGAGCGGGAGAAGCGACGACA
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CCCCCTGGCCCTGTTCCCAGCCTGCTGGCCCTATCCCTGCTCCGCTCCAGACTGCCCTTCCACTAGCC
TTTTGGCCTCCCAGTCACTTGTGCCACCTAGTGGGTTGCCTGGTCTGGTGCCCCAGAAGTCTGCCTTA
CTTCCCATCTGGCCACCACCTCAGATCCTGGGCTCACCCCTCAGCCTTCTACATCAGAGTCACCTGAT
GTCAACCTGGTGACTCAGCAGCTGTCCAAGTCTCAGGTGGAGACCCCTGCCTCCTGTGTCTCTGGCA
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TATGGGTGTGGCTGATGGCCACAGGATGGCCAGGCACTCAGCCTCACTCTCAGCCTCTCCTTGTCT
GACTGGCTTGGGGCCATGGCATGAACCCTGCTGACATTGAGTCTCTGCAGCGTGAGATCCAGATGGACT
CCCCAATGCTGCTGTCTGACCTGCCTGACCTCCAAGAGCCC

ACGGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR230831 representing NM_001291036
 Red=Cloning site Green=Tags(s)

MESDLHQIIHSSQPLTLEHVRYFLYQLLRGLKYMHTSAQVIHRDLKPSNLLVNENCLKIGDFGMARGLCT
 SPAEHQYFMTEYVATRWYRAPELMLSLHEYTQAIDLWSVGCIFGEMLARRQLFPGKNYVHQLQLIMMVLG
 TPSPAVIQAVGAERVYAIQSLPPRQPVPWETVYPGADRQALSLGRMLRFEPSARISAAAALRHPFLAK
 YHDPDDEPDCAPPDFDAFDREALTRERIKEAIVAEIEDFHARREGIRQQIRFQPSLQPVASEPVPDDEM
 PSPWAPSGDCAMESPPPALPPCSDPAPDVTDLTLQPAPPASELAPPKREGAISDNTKAALKAALLKSLRS
 RLRDGPSPALEAPEPRKPVTAQERQREEREKRRRRQERAKERERKRRQERERKERGAGTLGGPSTDP
 LAGLVLSNDRSLLERWTRMARPPAP
 PPGPVPQPAGPIAPLQTAPSTLLASQSLVPPSGLPGSGAPEVLPYFSPGPPPPDPGLTPQPSTSESPD
 VNLVTQQLSKSQVEDPLPPVFGTTPKSGSAGYGVGFDLEEF LNQSFDMGVADGPDQGDASASLSASLLA
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

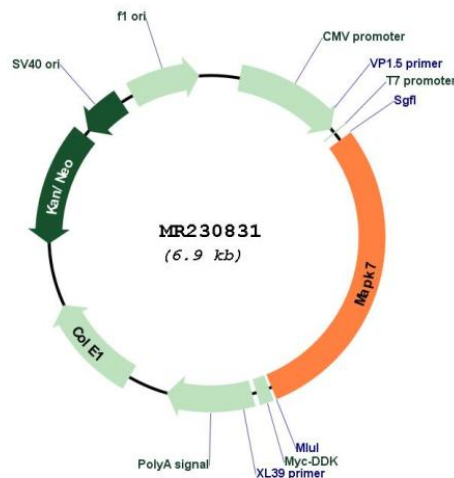
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001291036

ORF Size: 2001 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_001291036.1](#), [NP_001277965.1](#)

RefSeq Size: 3114 bp

RefSeq ORF: 2004 bp

Locus ID: 23939

UniProt ID: [Q9WVS8](#)

Cytogenetics: 11 B2

MW: 72.9 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]