

Product datasheet for **RG212228**

ERK5 (MAPK7) (NM_139033) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ERK5 (MAPK7) (NM_139033) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MAPK7
Synonyms:	BMK1; ERK4; ERK5; PRKM7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG212228 representing NM_139033
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCCGAGCCTCTGAAGGAGGAAGACGGCGAGGACGGCTCTGCGGAGCCCCCGGGCCCGTGAAGGCCG
 AACCCGCCACACCGCTGCCTCTGTAGCGGCCAAGAACCCTGGCCCTGCTTAAAGCCCGCTCTTCGATGT
 GACCTTTGACGTGGGCGACGAGTACGAGATCATCGAGACCATAGGCAACGGGGCCTATGGAGTGGTGTC
 TCCGCCCGCCCGCCTCACCGGCCAGCAGGTGGCCATCAAGAAGATCCCTAATGCTTTCGATGTGGTGA
 CCAATGCCAAGCGGACCCTCAGGAGCTGAAGATCCTCAAGCACTTTAAACACGACAACATCATGCCAT
 CAAGGACATCCTGAGGCCACCGTGCCTATGGCGAATCAAATCTGTCTACGTGGTCTGGACCTGATG
 GAAAGCGACCTGCACCAGATCATCCACTCCTCACAGCCCCTCACACTGGAACACGTGCGCTACTTCTGT
 ACCAAGTCTGCGGGCCTGAAGTACATGCACTCGGCTCAGGTCATCCACCGTACCTGAAGCCCTCCAA
 CCTATTGGTGAATGAGAAGTGTGAGCTCAAGATTGGTACTTTGGTATGGCTCGTGGCCTGTGCACCTCG
 CCCGCTGAACATCAGTACTTCATGACTGAGTATGTGGCCACGCGTGGTACCGTGCGCCCGAGCTCATGC
 TCTCTTTCATGAGTATACACAGGCTATTGACCTCTGGTCTGTGGGCTGCATCTTTGGTGAAGTGTGGC
 CCGGCGCCAGCTCTCCAGGCAAAAATATGTACACCAGCTACAGCTCATCATGATGGTGTGGTACC
 CCATCACCAGCCGTGATTCAGGCTGTGGGGCTGAGAGGGTGGGGCCTATATCCAGAGCTTGCCACCAC
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 GCTGCGTTTTGAGCCAGCGCTCGCATCTCAGCAGCTGCTGCCCTTCGCCACCCTTCTTGCCAAAGTAC
 CATGATCCTGATGATGAGCCTGACTGTGCCCGCCCTTTGACTTTGCCTTTGACCGCGAAGCCCTCACTC
 GGGAGCGCATTAAAGGAGCCATTGTGGCTGAAATTGAGGACTTCCATGCAAGCGGTGAGGGCATCCGCCA
 ACAGATCCGCTTCCAGCCTTCTCTACAGCCTGTGGCTAGTGAGCCTGGCTGTCCAGATGTTGAAATGCC
 AGTCCCTGGGCTCCAGTGGGACTGTGCCATGGAGTCTCCACCACCGCCCGCCACCATGCCCGGCC
 CTGCACCTGACACCATTGATCTGACCCTGCAGCCACCTCCACCAGTCAAGTGAAGCCTGCCCCACAAAGAA
 AGATGGTGCCATCTCAGACAATACTAAGGCTGCCCTTAAAGTGCCTGCTCAAGTCTTTGAGGAGCCGG
 CTCAGAGGTGCCTTGTGGGAGGTGGGTGGGAGAGGGGAGACTTGGACTTGGACAAGGCTTCAGGCTT
 TTACCTTCTCCCCTGCCCAACTCCCCGCAGATGGCCCCAGCGCACCCCTGGAGGCTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG212228 representing NM_139033
 Red=Cloning site Green=Tags(s)

MAEPLKEEDGEDGSAEPPGPVKAEPHAHTAASVAAKNLALLKARSFDVTFDVGDEYEIETIGNGAYGVVS
 SARRRLTGQOVAIKKIPNAFDVVTNAKRTLRELKILKHFKHDNIIA IKDILRPTVPYGEFKSVYVLDLM
 ESDLHQI IHSSQPLTLEHVRYFLYQLLRGLKYMHSQAQVIHRDLKPSNLLVNENELKIGDFGMARGLCTS
 PAEHQYFMTEYVATRWRAPLMLSLHEYTQAIDLWSVGCIFGEMLARRQLFPGKNYVHQLQLIMMVLGT
 PSPAVIQAVGAERVYAIQSLPPRPVWETVYPGADRQALSLLGRMLRFEPSARISAAAALRHPFLAKY
 HDPDDEPDCAPPDFDFAFDREALTRERIKEAIVAEIEDFHARREGIRQQIRFQPSLQPVASEPGCPDVEMP
 SPWAPSGDCAMESPPPPAPPPCPGPAPDTIDLTLQPPPPVSEPPPKKDGAISDNTKAALKAALLKSLRSR
 LRGALWAGRVGRGETWTWTRLQAFTFSPAQLPRRWPQRTPGGS

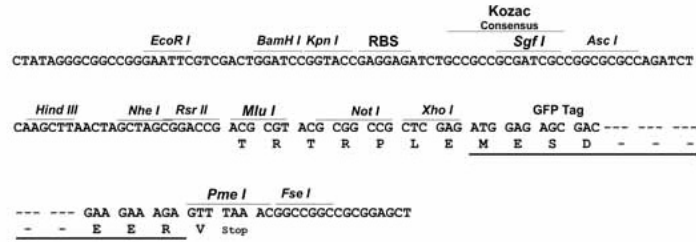
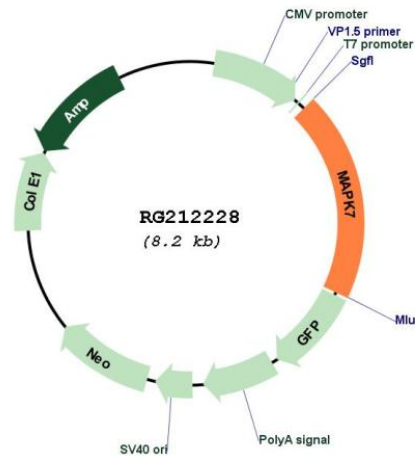
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:


Plasmid Map:


ACCN:	NM_139033
ORF Size:	2448 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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_139033.1 , NP_620602.1
RefSeq Size:	3183 bp
RefSeq ORF:	2451 bp
Locus ID:	5598
UniProt ID:	Q13164
Cytogenetics:	17p11.2
Domains:	pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Gap junction, GnRH signaling pathway, MAPK signaling pathway, Neurotrophin signaling pathway

Gene Summary:

The protein encoded by this gene is a member of the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. This kinase is specifically activated by mitogen-activated protein kinase kinase 5 (MAP2K5/MEK5). It is involved in the downstream signaling processes of various receptor molecules including receptor type kinases, and G protein-coupled receptors. In response to extracellular signals, this kinase translocates to cell nucleus, where it regulates gene expression by phosphorylating, and activating different transcription factors. Four alternatively spliced transcript variants of this gene encoding two distinct isoforms have been reported. [provided by RefSeq, Jul 2008]