

## Product datasheet for **RC216589**

### MAPK15 (NM\_139021) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MAPK15 (NM_139021) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MAPK15
Synonyms:	ERK7; ERK8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC216589 representing NM\_139021  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTGCACCGTAGTGACCCTCGCATTGTCCGGAGATACCTACTCAGCGGCAGCTCGGGCAGGGGGCC  
 ATGGCATTGTGTGAAGGCAGTGGACCGGAGGACTGGTGAGGTCGTGGCCATCAAGAAAATCTTTGATGC  
 TTTTAGGGATAAGACAGATGCCAGAGAACATTCGGGAAATCACGCTCCTCCAGGAGTTTGGGGACCAT  
 CCCAACATCATCAGCTCCTTGACGTGATCCGGGCAGAGAACGACAGGGACATTTACCTGGTGTGGT  
 TTATGGACACTGACCTGAACGCAGTATCCGGAAGGGCGGCTGCTGCAGGACGTCCACGTGCGCTCCAT  
 CTTCTACCAGCTCCTGCGGGCCACCCGGTTCTCCACTCGGGGCAGTGTGCACCGGGACCAGAAGCCG  
 TCCAATGTGCTCCTGGATGCCAACTGCACAGTGAAGCTGTGTGACTTTGGCTGGCCGCTCCCTGGGGC  
 ACCTCCCCGAGGGGCTGAGGACCAGCCGTGACAGAGTACGTGGCCACACGCTGGTACCGAGCACCGGA  
 GGTGCTGCTCTTTCGCACCGATACACCCTTGGGGTGGACATGTGGAGTCTGGGCTGTATCTGGGGGAG  
 ATGCTGCGGGGGAGACCCCTGTTCCCGGCACGTCCACCCTCCACCAGCTGGAGCTGATCCTGGAGACCA  
 TCCCACCGCCATCTGAGGAGGACCTCCTGGCTCTCGGCTCAGGCTGCCGTGCCTCTGTGCTGCACAGCT  
 GGGGTCCCAGCCACGACAGACGCTGGATGCCCTCCTACCGCCAGACACCTCCCAGAGGCTTGGACCTC  
 CTTAGGCGACTCCTGGTGTTCGCCCCGACAAGCGGTTAAGCGCGACCCAGGCACTGCAGCACCCCTACG  
 TGCAGAGGTTCCACTGCCCCAGCGACGAGTGGGCACGAGAGGCAGATGTGCGGCCCGGGCACACGAAGG  
 GGTCCAGCTCTCTGTGCTGAGTACCGCAGCCGCTCTATCAGATGATCCTGGAGTGTGGAGGCAGCAGC  
 GGCACCTCGAGAGAGAAGGGCCCGGAGGGTGTCTCCCAAGCCAGGCACACCTGCACAAACCCAGAGCCG  
 ACCCTCAGCTGCCTTCTAGGACACCTGTGCAAGGTCAGAGCCAGGCCCCAGAGCAGCCAGGCGCATGA  
 CCTGCGGAGCAGGAGTCCCCCGTGCAGCCAAGAACGTTCCAGGCAGAACTCCGCTCCCTGCTCCAA  
 ACTGCTCTCCTAGGGAATGGGAAAGGCCCCCTGGGGCAAGGAAGCGCCCCCTTGACACTCTCGCTGG  
 TGAAGCCAAGCGGGAGGGGAGCTGCGCCCTCCTGACCTCCAGGCTGCGGCTCAGGTGGCCAACAGGC  
 CCTGATCCGGGTGACTGGAACCGGGCGGTGGGGTGGGGTGGCCAGCGTACAACAGGTCCCTCCCCGG  
 CTTCTCCGGAGGCCCGCCCGGCGGAGGATGTTCAGCACCTCTGCCTTGCAAGGTGCCAGGGGGGTG  
 CCAGGGCTTTGCTTGGAGGCTACTCCAAGCCTACGGGACTGTCTGCCACTCGGCACTGGCCACCTGCC  
 CCTGCTGGAGGGCACCATGTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC216589 representing NM\_139021  
 Red=Cloning site Green=Tags(s)

MCTVVDPRIVRRYLLRRQLGQGYGIVVKAVDRRTGEVVAIKKIFDAFRDKTDAQRTFREITLLQEFGDH  
 PNIIISLLDVIRAENRDIYLVFEFMDTLNAVIRKGGLLQDVHVRSIFYQLLRATRFLHSGHVVHRDQKP  
 SNVLLDANCTVKLCDFGLARSLGDLPEGPEDQAVTEYVATRWYRAPEVLLSSHRYTLGVMWSLGCILGE  
 MLRGRPLFPGTSTLHQLELILETIPPPSEEDLLALGSGCRASVLHQLGSRPRQTLDALPPDTSPEALDL  
 LRRLLVFAPDKRLSATQALQHPYVQRFHCPSEWAREADVRPRAHEGVQLSVPEYRSRVYQMILECGSS  
 GTSREKGPVSPSQAHLHKPRADPQLPSRTPVQGPRPRPQSSPGHDPAEHESPRAAKNVPRQNSAPLLQ  
 TALLNGERPPGAKEAPPLTLVLKPSGRGAAPSLTSQAAAQVANQALIRGDWNRGGVVRVASVQQVPPR  
 LPPEARPGRRMFSTLALQGAQGGARALLGGYSQAYGTVCHSALGHLPLLEGHHV

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/ja1406\\_b10.zip](https://cdn.origene.com/chromatograms/ja1406_b10.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_139021

**ORF Size:** 1632 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\\_139021.3](#)

**RefSeq Size:** 1904 bp

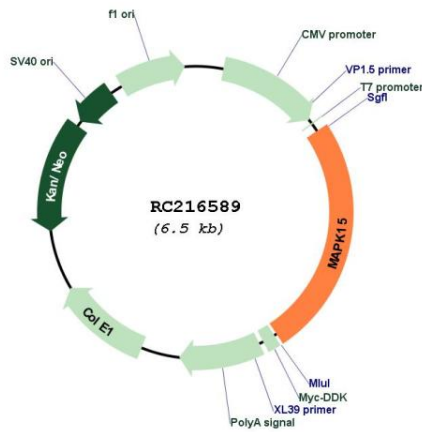
**RefSeq ORF:** 1635 bp

**Locus ID:** 225689

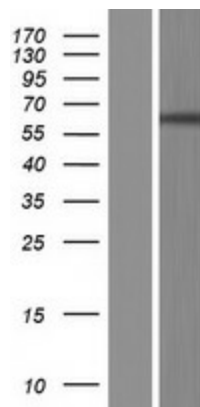
**UniProt ID:** [Q8TD08](#)

<b>Cytogenetics:</b>	8q24.3
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>MW:</b>	60.3 kDa
<b>Gene Summary:</b>	<p>Atypical MAPK protein that regulates several process such as autophagy, ciliogenesis, protein trafficking/secretion and genome integrity, in a kinase activity-dependent manner (PubMed:22948227, PubMed:24618899, PubMed:29021280, PubMed:21847093, PubMed:20733054). Controls both, basal and starvation-induced autophagy through its interaction with GABARAP, MAP1LC3B and GABARAPL1 leading to autophagosome formation, SQSTM1 degradation and reduced MAP1LC3B inhibitory phosphorylation (PubMed:22948227). Regulates primary cilium formation and the localization of ciliary proteins involved in cilium structure, transport, and signaling (PubMed:29021280). Prevents the relocation of the sugar-adding enzymes from the Golgi to the endoplasmic reticulum, thereby restricting the production of sugar-coated proteins (PubMed:24618899). Upon amino-acid starvation, mediates transitional endoplasmic reticulum site disassembly and inhibition of secretion (PubMed:21847093). Binds to chromatin leading to MAPK15 activation and interaction with PCNA, that which protects genomic integrity by inhibiting MDM2-mediated degradation of PCNA (PubMed:20733054). Regulates DA transporter (DAT) activity and protein expression via activation of RhoA (PubMed:28842414). In response to H(2)O(2) treatment phosphorylates ELAVL1, thus preventing it from binding to the PDCD4 3' UTR and rendering the PDCD4 mRNA accessible to miR-21 and leading to its degradation and loss of protein expression (PubMed:26595526). Also functions in a kinase activity-independent manner as a negative regulator of growth (By similarity). Phosphorylates in vitro FOS and MBP (PubMed:11875070, PubMed:16484222, PubMed:20638370, PubMed:19166846). During oocyte maturation, plays a key role in the microtubule organization and meiotic cell cycle progression in oocytes, fertilized eggs, and early embryos (By similarity). Interacts with ESRRB promoting its re-localization from the nucleus to the cytoplasm and then prevents its transcriptional activity (PubMed:21190936).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for RC216589



Western blot validation of overexpression lysate (Cat# [LY403383]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216589 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).