

## Product datasheet for **RC402654**

### MEK1 (MAP2K1) (NM\_002755) Human Mutant ORF Clone

#### Product data:

Product Type:	Mutant ORF Clones
Product Name:	MEK1 (MAP2K1) (NM_002755) Human Mutant ORF Clone
Mutation Description:	P124Q
Affected Codon#:	124
Affected NT#:	371
Nucleotide Mutation:	MAP2K1 Mutant (P124Q), Myc-DDK-tagged ORF clone of Homo sapiens mitogen-activated protein kinase kinase 1 (MAP2K1) as transfection-ready DNA
Effect:	Cardio-facio-cutaneous syndrome
Symbol:	MAP2K1
Synonyms:	CFC3; MAPKK1; MEK1; MEL; MKK1; PRKMK1
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_002755
ORF Size:	1179 bp
Restriction Sites:	Sgfi-MluI



[View online »](#)

ORF Nucleotide  
Sequence:

>RC402654 representing NM\_002755  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGCCAAGAAGAAGCCGACGCCATCCAGCTGAACCCGGCCCCGACGGCTCTGCAGTTAACGGGACCA  
GCTCTGCGGAGACCAACTTGGAGCCTTGCAGAAGAAGCTGGAGGAGCTAGAGCTTGATGAGCAGCAGCG  
AAAGCGCCTTGAGGCCTTTCTTACCCAGAAGCAGAAGGTGGGAGAACTGAAGGATGACGACTTTGAGAAG  
ATCAGTGAGCTGGGGCTGGCAATGGCGGTGTGGTGTCAAGGTCTCCACAAGCCTTCTGGCCTGGTCA  
TGGCCAGAAAAGCTAATTCATCTGGAGATCAAACCCGCAATCCGGAACCAGATCATAAGGGAGCTGCAGGT  
TCTGCATGAGTCAACTCTCAGTACATCGTGGCTTCTATGGTGCCTTACAGCGATGGCGAGATCAGT  
ATCTGCATGGAGCACATGGATGGAGTTCTCTGGATCAAGTCTGAAGAAAGCTGGAAGAATTCCTGAAC  
AAATTTTAGGAAAAGTTAGCATTGCTGTAATAAAAGGCCTGACATATCTGAGGGAGAAGCACAAGATCAT  
GCACAGAGATGTCAAGCCCTCCAACATCTAGTCAACTCCCGTGGGAGATCAAGCTCTGTGACTTTGGG  
GTCAGCGGGCAGCTCATCGACTCCATGGCCAACCTCTCGTGGGCACAAGGTCTACATGTCGCCAGAAA  
GACTCCAGGGGACTCATTACTCTGTGCAGTCAGACATCTGGAGCATGGGACTGTCTCTGGTAGAGATGGC  
GGTTGGGAGGTATCCCATCCCTCCTCCAGATGCCAAGGAGCTGGAGCTGATGTTGGGTGCCAGGTGGAA  
GGAGATGCGGCTGAGACCCACCCAGGCCAAGGACCCCGGGAGGCCCTTAGCTCATACGGAATGGACA  
GCCGACCTCCCATGGCAATTTTGGAGTTGTTGGATTACATAGTCAACGAGCCTCTCCAAAACCTGCCAG  
TGGAGTGTTCAGTCTGGAATTTCAAGATTTTGTGAATAAATGCTTAATAAAAAACCCCGCAGAGAGAGCA  
GATTTGAAGCAACTCATGGTTCATGCTTTTATCAAGAGATCTGATGCTGAGGAAGTGGATTTTGCAGGTT  
GGCTCTGCTCCACCATCGGCCTTAACCAGCCCAGCACACCAACCCATGCTGCTGGCGTC

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA

## Protein Sequence:

>RC402654 representing NM\_002755  
Red=Cloning site Green=Tags(s)

MPKKKPTPIQLNPAPDGSVNGTSSAETNLEALQKKLEELDEQQRKLEAFLTQKQKVGELKDDDFEK  
ISELGAGNGGVVFKVSHKPSGLVMARKLIHLEIKPAIRNQIIRELQVLHECNSQYIVGFYGFYSDGEIS  
ICMEHMDGGSLDQVLKAGRIPEQILGKVSIAVIKGLTYLREKHKIMHRDVKPSNILVNSRGEIKLCDFG  
VSGQLIDSMANSFVGTSPERLQGTHYSVQSDIWSMGLSLVEMAVGRYPIPPDAKELELMFGCQVE  
GDAAETPPRPRTGPRPLSSYGMSRPPMAIFELLDYIVNEPPPKLPSGVFSLEFQDFVNKCLIKNPAERA  
DLKQLMVHAFIKRSDAEVDFAGWLCSTIGLNQSPSTPHAAGV

SGPTRRRLEQKLI SEEDLAANDILDYKDDDDKV

## Restriction Sites:

Sgfl-MluI

**Cloning Scheme:**

**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).

**RefSeq:**

[NP\\_002746](#)

**RefSeq Size:**

1179 bp

**RefSeq ORF:**

1182 bp

**Locus ID:**

5604

**Cytogenetics:**

15q22.31

**Domains:**

pkinase, TyrKc, S\_TKc

**Protein Families:**

Druggable Genome, Protein Kinase

<b>Protein Pathways:</b>	Acute myeloid leukemia, B cell receptor signaling pathway, Bladder cancer, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Dorso-ventral axis formation, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Insulin signaling pathway, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Melanoma, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Non-small cell lung cancer, Oocyte meiosis, Pancreatic cancer, Pathways in cancer, Prion diseases, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway, Thyroid cancer, Toll-like receptor signaling pathway, Vascular smooth muscle contraction, VEGF signaling pathway
<b>MW:</b>	43.2 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is a member of the dual specificity protein kinase family, which acts as a mitogen-activated protein (MAP) kinase kinase. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals. This protein kinase lies upstream of MAP kinases and stimulates the enzymatic activity of MAP kinases upon wide variety of extra- and intracellular signals. As an essential component of MAP kinase signal transduction pathway, this kinase is involved in many cellular processes such as proliferation, differentiation, transcription regulation and development. [provided by RefSeq, Jul 2008]