

Product datasheet for RC402656

OriGene Technologies, Inc.

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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: Y130C
Affected Codon#: 130
Affected NT#: 389

Nucleotide Mutation: MAP2K1 Mutant (Y130C), 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 Neomycin

Selection:

Vector: pCMV6-Entry (PS100001)

 Tag:
 Myc-DDK

 ACCN:
 NM_002755

 ORF Size:
 1179 bp

Restriction Sites: Sgfl-Mlul

MEK1 (MAP2K1) (NM_002755) Human Mutant ORF Clone - RC402656

ORF Nucleotide Sequence:

>RC402656 representing NM_002755
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGCCCAAGAAGAAGCCGACGCCCATCCAGCTGAACCCGGCCCCGACGGCTCTGCAGTTAACGGGACCA AAAGCGCCTTGAGGCCTTTCTTACCCAGAAGCAGAAGGTGGGAGAACTGAAGGATGACGACTTTGAGAAG ATCAGTGAGCTGGGGGCTGGCAATGGCGGTGTGGTGTTCAAGGTCTCCCACAAGCCTTCTGGCCTGGTCA TGGCCAGAAAGCTAATTCATCTGGAGATCAAACCCGCAATCCGGAACCAGATCATAAGGGAGCTGCAGGT TCTGCATGAGTGCAACTCTCCGTACATCGTGGGCTTCTGTGGTGCGTTCTACAGCGATGGCGAGATCAGT ATCTGCATGGAGCACATGGATGGAGGTTCTCTGGATCAAGTCCTGAAGAAAGCTGGAAGAATTCCTGAAC AAATTTTAGGAAAAGTTAGCATTGCTGTAATAAAAGGCCTGACATATCTGAGGGAGAAGCACAAGATCAT GCACAGAGATGTCAAGCCCTCCAACATCCTAGTCAACTCCCGTGGGGAGATCAAGCTCTGTGACTTTGGG GTCAGCGGCAGCTCATCGACTCCATGGCCAACTCCTTCGTGGGCACAAGGTCCTACATGTCGCCAGAAA GACTCCAGGGGACTCATTACTCTGTGCAGTCAGACATCTGGAGCATGGGACTGTCTCTGGTAGAGATGGC GGTTGGGAGGTATCCCATCCCTCCAGATGCCAAGGAGCTGGAGCTGATGTTTGGGTGCCAGGTGGAA GGAGATGCGGCTGAGACCCCACCCAGGCCAAGGACCCCCGGGAGGCCCCTTAGCTCATACGGAATGGACA GCCGACCTCCCATGGCAATTTTTGAGTTGTTGGATTACATAGTCAACGAGCCTCCTCCAAAACTGCCCAG GATTTGAAGCAACTCATGGTTCATGCTTTTATCAAGAGATCTGATGCTGAGGAAGTGGATTTTGCAGGTT GGCTCTGCTCCACCATCGGCCTTAACCAGCCCAGCACCCAACCCATGCTGCTGGCGTC

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

>RC402656 representing NM_002755
Red=Cloning site Green=Tags(s)

MPKKKPTPIQLNPAPDGSAVNGTSSAETNLEALQKKLEELELDEQQRKRLEAFLTQKQKVGELKDDDFEK ISELGAGNGGVVFKVSHKPSGLVMARKLIHLEIKPAIRNQIIRELQVLHECNSPYIVGFCGAFYSDGEIS ICMEHMDGGSLDQVLKKAGRIPEQILGKVSIAVIKGLTYLREKHKIMHRDVKPSNILVNSRGEIKLCDFG VSGQLIDSMANSFVGTRSYMSPERLQGTHYSVQSDIWSMGLSLVEMAVGRYPIPPPDAKELELMFGCQVE GDAAETPPRPTPGRPLSSYGMDSRPPMAIFELLDYIVNEPPPKLPSGVFSLEFQDFVNKCLIKNPAERA DLKQLMVHAFIKRSDAEEVDFAGWLCSTIGLNQPSTPTHAAGV

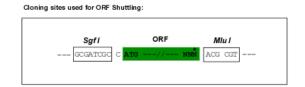
SGPTRTRRLEQKLISEEDLAANDILDYKDDDDK**V**

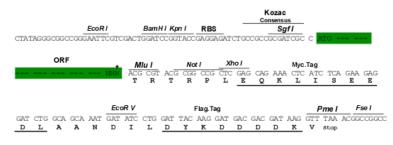
Restriction Sites:

Sgfl-Mlul



Cloning Scheme:





^{*} The last codon before the Stop codon of the ORF

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 bpRefSeq ORF:1182 bpLocus ID:5604

Cytogenetics: 15q22.31

Domains: pkinase, TyrKc, S_TKc

Protein Families: Druggable Genome, Protein Kinase



Protein Pathways:

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

MW:

43.2 kDa

Gene Summary:

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]