

Product datasheet for RC403505

OriGene Technologies, Inc.

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MEK2 (MAP2K2) (NM_030662) Human Mutant ORF Clone

Product data:

Product Type: Mutant ORF Clones

Product Name: MEK2 (MAP2K2) (NM_030662) Human Mutant ORF Clone

Mutation Description: G132V

Affected Codon#: 132

Affected NT#: 395

Nucleotide Mutation: MAP2K2 Mutant (G132V), Myc-DDK-tagged ORF clone of Homo sapiens mitogen-activated

protein kinase kinase 2 (MAP2K2) as transfection-ready DNA

Effect: Crdio-fio-uneous syndrome

Symbol: MAP2K2

Synonyms: CFC4; MAPKK2; MEK2; MKK2; PRKMK2

E. coli Selection: Kanamycin (25 ug/mL)

Mammalian Cell

Selection:

Neomycin

Vector: pCMV6-Entry (PS100001)

Tag: Myc-DDK
ACCN: NM 030662

ORF Size: 1200 bp
Restriction Sites: Sgfl-Mlul

MEK2 (MAP2K2) (NM_030662) Human Mutant ORF Clone - RC403505

ORF Nucleotide Sequence:

>RC403505 representing NM_030662
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGCTGGCCCGGAGGAAGCCGGTGCTGCCGGCGCTCACCATCAACCCTACCATCGCCGAGGGCCCATCCC CTACCAGCGAGGCCCTCCGAGGCAAACCTGGTGGACCTGCAGAAGAAGCTGGAGGAGCTGGAACTTGA CGAGCAGCAGAAGAAGCGGCTGGAAGCCTTTCTCACCCAGAAAGCCAAGGTCGGCGAACTCAAAGACGAT GACTTCGAAAGGATCTCAGAGCTGGGCGCGGGCAACGGCGGGGTGGTCACCAAAGTCCAGCACAGACCCT CGGGCCTCATCATGGCCAGGAAGCTGATCCACCTTGAGATCAAGCCGGCCATCCGGAACCAGATCATCCG CGAGCTGCAGGTCCTGCACGAATGCAACTCGCCGTACATCGTGGTCTTCTACGGGGCCTTCTACAGTGAC GGGGAGATCAGCATTTGCATGGAACACATGGACGGCGGCTCCCTGGACCAGGTGCTGAAAGAGGCCAAGA GGATTCCCGAGGAGATCCTGGGGAAAGTCAGCATCGCGGTTCTCCGGGGCTTGGCGTACCTCCGAGAGAA GCACCAGATCATGCACCGAGATGTGAAGCCCTCCAACATCCTCGTGAACTCTAGAGGGGAGATCAAGCTG TGTGACTTCGGGGTGAGCGGCCAGCTCATCGACTCCATGGCCAACTCCTTCGTGGGCACGCGCTCCTACA TGGCTCCGGAGCGGTTGCAGGGCACACATTACTCGGTGCAGTCGGACATCTGGAGCATGGGCCTGTCCCT CCGTCAGCGGTCACGGGATGGATAGCCGGCCTGCCATGGCCATCTTTGAACTCCTGGACTATATTGTGAA CGAGCCACCTCCTAAGCTGCCCAACGGTGTTCTCACCCCCGACTTCCAGGAGTTTGTCAATAAATGCCTC ATCAAGAACCCAGCGGAGCGGGCCGGACCTGAAGATGCTCACAAACCACCTTCATCAAGCGGTCCGAGG TGGAAGAAGTGGATTTTGCCGGCTGGTTGTGAAAACCCTGCGGCTGAACCAGCCCGGCACACCCACGCG **CACCGCCGTG**

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC TGGATTACAAGGATGACGACGA TAAG**GTTTAA**

Protein Sequence:

>RC403505 representing NM_030662
Red=Cloning site Green=Tags(s)

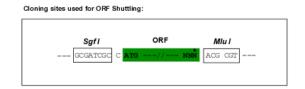
MLARRKPVLPALTINPTIAEGPSPTSEGASEANLVDLQKKLEELELDEQQKKRLEAFLTQKAKVGELKDD DFERISELGAGNGGVVTKVQHRPSGLIMARKLIHLEIKPAIRNQIIRELQVLHECNSPYIVVFYGAFYSD GEISICMEHMDGGSLDQVLKEAKRIPEEILGKVSIAVLRGLAYLREKHQIMHRDVKPSNILVNSRGEIKL CDFGVSGQLIDSMANSFVGTRSYMAPERLQGTHYSVQSDIWSMGLSLVELAVGRYPIPPPDAKELEAIFG RPVVDGEEGEPHSISPRPRPPGRPVSGHGMDSRPAMAIFELLDYIVNEPPPKLPNGVFTPDFQEFVNKCL IKNPAERADLKMLTNHTFIKRSEVEEVDFAGWLCKTLRLNQPGTPTRTAV

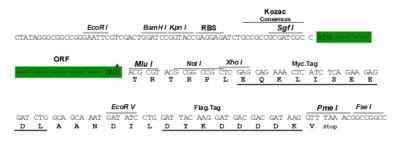
SGPTRTRRLEQKLISEEDLAANDILDYKDDDDK**V**

Restriction Sites: Sgfl-Mlul



Cloning Scheme:





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

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 109587

RefSeq Size: 1200 bp
RefSeq ORF: 1203 bp
Locus ID: 5605

Cytogenetics: 19p13.3

Protein Pathways:

Domains: pkinase, TyrKc, S_TKc

Protein Families: Druggable Genome, Protein Kinase

Draggable denome, Protein Kinase

Acute myeloid leukemia, B cell receptor signaling pathway, Bladder cancer, Chronic myeloid leukemia, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, 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, Pathways in cancer, Prion diseases, 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



ORIGENE

MW:

44 kDa

Gene Summary:

The protein encoded by this gene is a dual specificity protein kinase that belongs to the MAP kinase kinase family. This kinase is known to play a critical role in mitogen growth factor signal transduction. It phosphorylates and thus activates MAPK1/ERK2 and MAPK2/ERK3. The activation of this kinase itself is dependent on the Ser/Thr phosphorylation by MAP kinase kinase kinases. Mutations in this gene cause cardiofaciocutaneous syndrome (CFC syndrome), a disease characterized by heart defects, cognitive disability, and distinctive facial features similar to those found in Noonan syndrome. The inhibition or degradation of this kinase is also found to be involved in the pathogenesis of Yersinia and anthrax. A pseudogene, which is located on chromosome 7, has been identified for this gene. [provided by RefSeq, Jul 2008]