

# Product datasheet for RC403499

## 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:** F57V Affected Codon#: 57 Affected NT#: 169 Nucleotide Mutation: MAP2K2 Mutant (F57V), 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 Neomycin Selection: Vector: pCMV6-Entry (PS100001) Myc-DDK Tag: ACCN: NM 030662 **ORF** Size: 1200 bp **Restriction Sites:** Sgfl-Mlul

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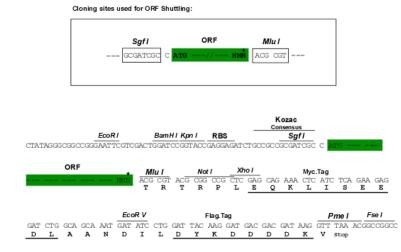
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	MEK2 (MAP2K2) (NM_030662) Human Mutant ORF Clone – RC403499
ORF Nucleotide Sequence:	<pre>&gt;RC403499 representing NM_030662 Red=Cloning site Blue=ORF Green=Tags(s)</pre>
	TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCC <mark>GCGATCGC</mark> C
	ATGCTGGCCCGGAGGAAGCCGGTGCTGCCGGCGCTCACCATCAACCCTACCATCGCCGAGGGCCCATCCC CTACCAGCGAGGGCGCCTCCGAGGCAAACCTGGTGGACCTGCAGAAAGCCGAGGAGCTGGAACTTGA CGAGCAGCAGAAGAAGCGGCTGGAAGCCGTTCTCACCCAGAAAGCCAAGGTCGGCGAACTCAAAGACGAT GACTTCGAAAGGATCTCAGAGCTGGCCGGGCCACGGCGGGGGGGG
	<b>AGCGGACCG</b> ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC TGGATTACAAGGATGACGACGA TAAG <b>GTTTAA</b>
Protein Sequence:	<pre>&gt;RC403499 representing NM_030662 Red=Cloning site Green=Tags(s)</pre>
	MLARRKPVLPALTINPTIAEGPSPTSEGASEANLVDLQKKLEELELDEQQKKRLEAVLTQKAKVGELKDD DFERISELGAGNGGVVTKVQHRPSGLIMARKLIHLEIKPAIRNQIIRELQVLHECNSPYIVGFYGAFYSD GEISICMEHMDGGSLDQVLKEAKRIPEEILGKVSIAVLRGLAYLREKHQIMHRDVKPSNILVNSRGEIKL CDFGVSGQLIDSMANSFVGTRSYMAPERLQGTHYSVQSDIWSMGLSLVELAVGRYPIPPPDAKELEAIFG RPVVDGEEGEPHSISPRPRPPGRPVSGHGMDSRPAMAIFELLDYIVNEPPPKLPNGVFTPDFQEFVNKCL IKNPAERADLKMLTNHTFIKRSEVEEVDFAGWLCKTLRLNQPGTPTRTAV
	SGPTRTRRLEQKLISEEDLAANDILDYKDDDDKV
<b>Restriction Sites:</b>	Sgfl-Mlul

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### **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. <u>More info</u>
- **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<br/>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
- **Domains:** pkinase, TyrKc, S\_TKc
- Protein Families: Druggable Genome, Protein Kinase

Protein Pathways:

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

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	MEK2 (MAP2K2) (NM_030662) Human Mutant ORF Clone – RC403499
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]

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