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Product datasheet for RC201971

MVK (NM_000431) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MVK (NM_000431) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MVK
Synonyms:	LRBP; MK; MVLK; POROK3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC201971 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTTGTCAGAAGTCCTACTGGTGTCTGCTCCGGGGAAAGTCATCCTTCATGGAGAACATGCCGTGGTAC
ATGGCAAGGTAGCACTGGCTGTATCCTTGAACTTGAGAACATTCCTCCGGCTTCAACCCCACAGCAATGG
GAAAGTGGACCTCAGCTTACCCAACATTGGTATCAAGCGGGCCTGGGATGTGGCCAGGCTTCAGTCACTG
GACACAAGCTTTCTGGAGCAAGGTGATGTCACAACACCCACCTCAGAGCAAGTGGAGAAGCTAAAGGAGG
TTGCAGGCTTGCCTGACGACTGTGCTGTCACCGAGCGCCTGGCTGTGCTGGCCTTTCTTTACTTATACCT
GTCCATCTGCCGGAAGCAGAGGGCCCTGCCGAGCCTGGATATCGTAGTGTGGTCGGAGCTGCCCCCCGGG
GCGGGCTTGGGCTCCAGCGCCGCCTACTCGGTGTGTCTGGCAGCAGCCCTCCTGACTGTGTGCGAGGAGA
TCCCAAACCCGCTGAAGGACGGGGATTGCGTCAACAGGTGGACCAAGGAGGATTTGGAGCTAATTAACAA
GTGGGCCTTCCAAGGGGAGAGAATGATTCACGGGAACCCCTCCGGAGTGGACAATGCTGTCAGCACCTGG
GGAGGAGCCCTCCGATACCATCAAGGGAAGATTTCATCCTTAAAGAGGTCGCCAGCTCTCCAGATCCTGC
TGACCAACACCAAAGTCCCTCGCAATACCAGGGCCCTTGTGGCTGGCGTCAGAAACAGGCTGCTCAAGTT
CCCAGAGATCGTGGCCCCCCTCCTGACCTCAATAGATGCCATCTCCCTGGAGTGTGAGCGCGTGCTGGGA
GAGATGGGGGAAGCCCCAGCCCCGGAGCAGTACCTCGTGCTGGAAGAGCTCATTGACATGAACCAGCACC
ATCTGAATGCCCTCGGCGTGGGCCACGCCTCTCTGGACCAGCTCTGCCAGGTGACCAGGGCCCGCGGACT
TCACAGCAAGCTGACTGGCGCAGGCGGTGGTGGCTGTGGCATCACACTCCTCAAGCCAGGGCTGGAGCAG
CCAGAAGTGGAGGCCACGAAGCAGGCCCTGACCAGCTGTGGCTTTGACTGCTTGGAAACCAGCATCGGTG
CCCCCGGCGTCTCCATCCACTCAGCCACCTCCCTGGACAGCCGAGTCCAGCAAGCCCTGGATGGCCTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC201971 protein sequence
Red=Cloning site Green=Tags(s)

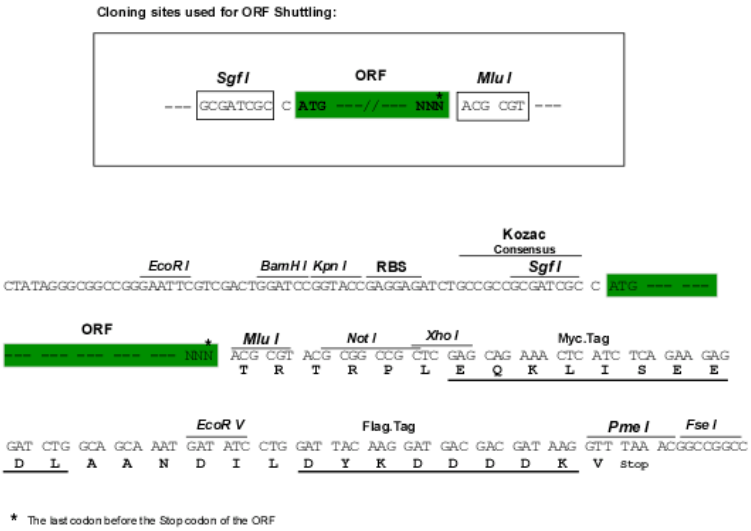
MLSEVLLVSAPGKVILHGEHAVVHGKVALAVSLNLRTFLRLQPHSNGKVDLSLPNIGIKRAWDVARLQSL
DTSFLEQGDVTTPTSEQVEKLKEVAGLPDDCAVTERLAVLAFLYLYLSICRKQRALPSLDIVVWSELPPG
AGLGSSAAYSVCLAAALLTVCEEIPNPLKDGDCVNRWTKEDLELINKWAFQGERMIHGNPSGVDNAVSTW
GGALRYHQGKISSLKRSPALQILLTNTKVPRNTRALVAGVRNRLLKFPEIVAPLLTSIDAISLECERVLG
EMGEAPAPEQYLVLEELIDMNQHHLNALGVGHASLDQLCQVTRARGLHSKLTGAGGGCGITLLKPGLEQ
PEVEATKQALTSCGFDCLETSIGAPGVSIHSATSLDSRVQQALDGL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6306_b06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000431

ORF Size: 1188 bp

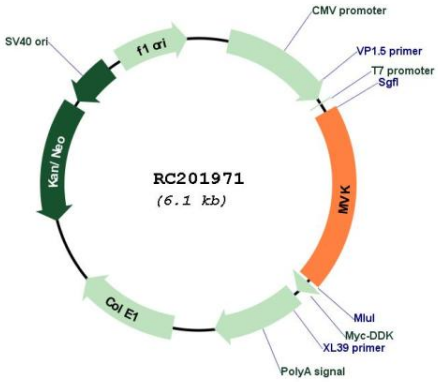
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

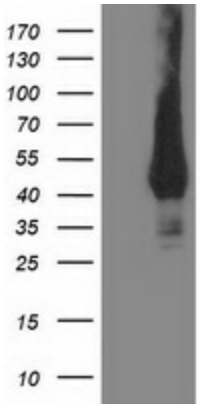
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_000431.4
RefSeq Size:	2084 bp
RefSeq ORF:	1191 bp
Locus ID:	4598
UniProt ID:	Q03426
Cytogenetics:	12q24.11
Domains:	GHMP_kinases
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Terpenoid backbone biosynthesis
MW:	42.5 kDa
Gene Summary:	This gene encodes the peroxisomal enzyme mevalonate kinase. Mevalonate is a key intermediate, and mevalonate kinase a key early enzyme, in isoprenoid and sterol synthesis. Mevalonate kinase deficiency caused by mutation of this gene results in mevalonic aciduria, a disease characterized psychomotor retardation, failure to thrive, hepatosplenomegaly, anemia and recurrent febrile crises. Defects in this gene also cause hyperimmunoglobulinaemia D and periodic fever syndrome, a disorder characterized by recurrent episodes of fever associated with lymphadenopathy, arthralgia, gastrointestinal dismay and skin rash. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2014]

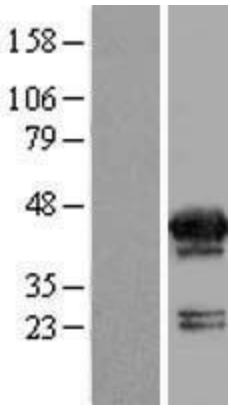
Product images:



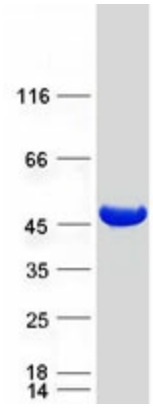
Circular map for RC201971



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MVK (Cat# RC201971, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MVK(Cat# [TA502934]). Positive lysates [LY424723] (100ug) and [LC424723] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY426476]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC225616] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MVK protein (Cat# [TP301971]). The protein was produced from HEK293T cells transfected with MVK cDNA clone (Cat# RC201971) using MegaTran 2.0 (Cat# [TT210002]).