

## Product datasheet for RC211310

### VAR2 (NM\_020442) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	VAR2 (NM_020442) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	VAR2
Synonyms:	COXPD20; VALRS; VAR2L; VARSL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC211310 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCTCATTGGCTCTCGCTCTTTTCGACCACCATTTGGGGCTGAGGCACTCACGGGGCTCCCCA  
GGTTTCACTCCGTTTCTACACAGTCGGAGCCCCATGGATCTCCCATCTCCCGAGGAACCGTGAAGCCAA  
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GAATCCATTAAGGCTGGAGGCCTAAGGAGTTAGTATTGTATGAAATCCCTACGAAACCCGGTAAAAGA  
AAGATGTCTCTGGGCCCTGCCTCCTGCATACAGCCCCGATATGTTGAGGCTGCCTGGTACCCGTGGT  
GGTACGAGAGGGCTTCTTCAAACCAGAATATCAGGCCCGCTGCCCAAGCTACAGGGGAGACCTTTTCC  
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CATCCAGACGACTCGGATACACACATCTACACGGGCGACAGCTTCGTCACCCCTTGATGGGGCAGCCTC  
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TTCTGGGATGTGATAGAATACCTGCTGAAGAACCAGTGGTTTGTCCGCTGCCAGGAAATGGGGCCCGA



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GCTGCCAAGGCTGTGGAGTCGGGGGCCCTGGAGCTCAGTCCCTCCTTCCACCAGAAGAACTGGCAGCACT  
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**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
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**Protein Sequence:**

>RC211310 protein sequence  
 Red=Cloning site Green=Tags(s)

MPHLPLASFRPPFWGLRHSRGLPRFHSVSTQSEPHGSPISRRNREAKQKRLREKQATLEAEIAGESKSPA  
 ESIAKAWRPKELVLYEIPTKPGEKKDVSGLPPAYSPRYVEAAWYPWWVREGFFKPEYQARLPQATGETFS  
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 CALRSAISDIEVENRPLPGHTQLRLPGCPTPVSFGLLFSVAFVVDGEPDAEVEVVGTTRPETLPGDVAVAV  
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 EVAAELTGRPGAELTLERDPDVLDTWFSALFPFSGALGWPQETPDLARFYPLSLETTGSDLLLFVWGRMV  
 MLGTQLTGQLPFKLVLLHPMVRDRQGRKMSKSLGNVLDPRDIISGVEMQVLQEKLRSGNLDPAELAIVAA  
 AQKKDFPHGIPECGTDALRFTLCSHGVDAGDLHLSVSEVQSCRHFENKIWNALRFILNALGEKFPQPPE  
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 VLFSCADLGLRLLAPLMPFLAEELWQLRPPRPGCPPAPSI SVAPYPSACSLHWRQPELERRF SRVQEVV  
 QVLRALQATYQLTKARPRVLLQSSEPGDQGLFEAFLEPLGTLGYCGAVGLLPPGAAAPSGWAQAPLSDTA  
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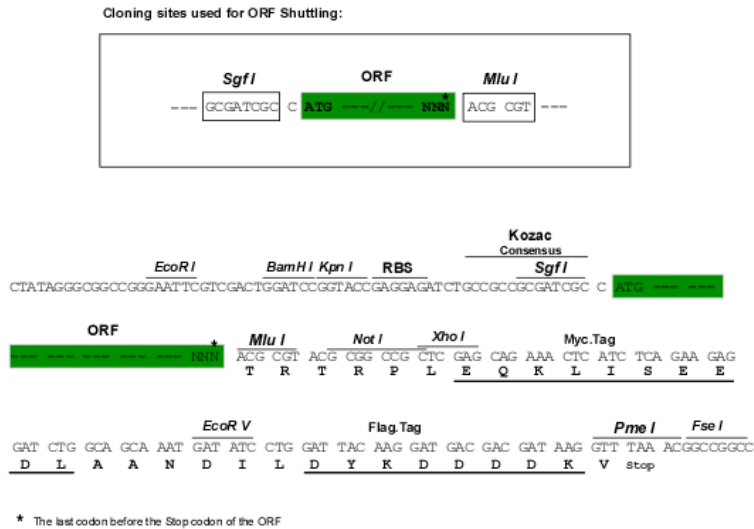
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6590\\_d10.zip](https://cdn.origene.com/chromatograms/mk6590_d10.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_020442

**ORF Size:** 3189 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.

**RefSeq:** [NM\\_020442.6](#)

**RefSeq Size:** 3622 bp

**RefSeq ORF:** 3192 bp

**Locus ID:** 57176

**UniProt ID:** [Q5ST30](#)

**Cytogenetics:** 6p21.33

**Domains:** tRNA-synt\_1

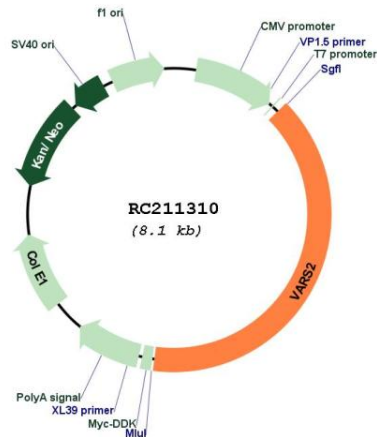
**Protein Families:** Druggable Genome, Transcription Factors

**Protein Pathways:** Aminoacyl-tRNA biosynthesis, Valine, leucine and isoleucine biosynthesis

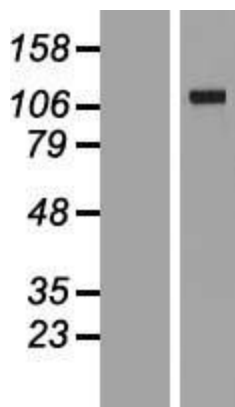
**MW:** 118.4 kDa

**Gene Summary:** This gene encodes a mitochondrial aminoacyl-tRNA synthetase, which catalyzes the attachment of valine to tRNA(Val) for mitochondrial translation. Mutations in this gene cause combined oxidative phosphorylation deficiency-20, and are also associated with early-onset mitochondrial encephalopathies. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Aug 2014]

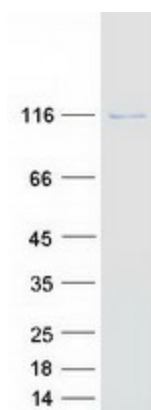
**Product images:**



Circular map for RC211310



Western blot validation of overexpression lysate (Cat# [LY412450]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211310 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified VAR2 protein (Cat# [TP311310]). The protein was produced from HEK293T cells transfected with VAR2 cDNA clone (Cat# RC211310) using MegaTran 2.0 (Cat# [TT210002]).