

## Product datasheet for MR201161

### Rfk (NM\_019437) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Rfk (NM\_019437) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Rfk  
**Synonyms:** 0610038L10Rik; AF031381; KOI-4  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR201161 representing NM\_019437  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAGGAGCCTGCCGTTCTTCTGCCGCGCCAGGTGGTGCCTGGCTTCGGCCGGCTCCAAGCAACTGG  
 GCATCCCCACAGCCAATTTCTGAACAAGTGGTGACAATCTCCAGCTGATGTGTCTACTGGCATTTA  
 TTATGGTTGGCCAGCGTTGGGAGCGCGATGTCCATAAAATGGTGGTGGCATTGGATGGAACCCGTAC  
 TATAAGAAATGTAAAAAGTCCATGAAACACACATCATCCATACCTTCAAAGAGGACTTCTATGGGGAAA  
 TTCTCAATGTGGCATTGTTGGCTATCTCAGACCTGAAAAGAACTTTGATTCTTTAGAGTCACTTATTT  
 TGCAATTCAGGTGATATTGAAGAAGCTAAAAGCAACTGGATTTACCCGAACATTTGAAACTCAAAGAT  
 GATAATTTCTTCCAAGTTCTAAAGGCAAATATGAATGGCCAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR201161 representing NM\_019437  
 Red=Cloning site Green=Tags(s)

MRSLPFFCRGQVVRGFRGSKQLGIPTANFPEQVVDNLPADVSTGIYYGWASVSGSDVHKMVSIGWNPY  
 YKNVKSMETHIHTFKEDFYGEILNVAIVGYLRPEKNFDSLESLSISAIQGDIEEAKKQLDLPEHLKLDK  
 DNFFQVSKGKIMNGH

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI



**Cloning Scheme:**


**ACCN:** NM\_019437

**ORF Size:** 465 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

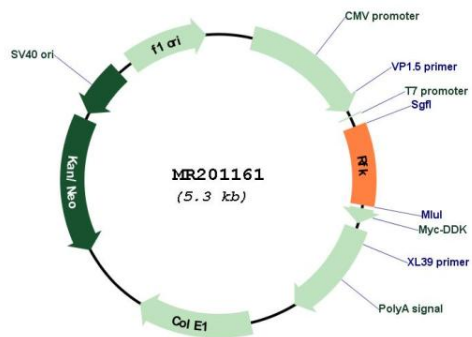
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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\\_019437.3, NP\\_062310.1](#)  
**RefSeq Size:** 2482 bp  
**RefSeq ORF:** 468 bp  
**Locus ID:** 54391  
**UniProt ID:** [Q8CFV9](#)  
**Cytogenetics:** 19 B  
**MW:** 17.9 kDa

**Gene Summary:** Catalyzes the phosphorylation of riboflavin (vitamin B2) to form flavin-mononucleotide (FMN), hence rate-limiting enzyme in the synthesis of FAD. Essential for TNF-induced reactive oxygen species (ROS) production. Through its interaction with both TNFRSF1A and CYBA, physically and functionally couples TNFRSF1A to NADPH oxidase. TNF-activation of RFK may enhance the incorporation of FAD in NADPH oxidase, a critical step for the assembly and activation of NADPH oxidase (By similarity).[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR201161