

## Product datasheet for **RC201484**

### **RIOK2 (NM\_018343) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RIOK2 (NM_018343) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RIOK2
Synonyms:	RIO2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC201484 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGAAAGTGAATGTGGCAAGTTGCGTTACATGAGCCGAGATGACTTCAGGGTCTTGACCCGGTTG  
 AAATGGGCATGAAGAACCATGAAATTGTTCCCGCAGTTTGATTGCTTCTATAGCCAGCCTTAAACATGG  
 TGGCTGTAAATAAAGTTTTAAGAGAAATTAGTGAAACATAAACTCATAGCTTGGGAGCGTACAAAACTGTC  
 CAGGGCTATCGGTTGACAAATGCAGGATATGATTACCTAGCTTTGAAAACACTTTCTTCTAGGCAAGTAG  
 TTGAGTCTGTTGGAAACCAGATGGGTGTTGGCAAAGAATCAGATATTTACATTGTTGCAAAATGAAGAAGG  
 ACAACAATTTGCATTAAGCTTTCACAGACTAGGAAGAACCTCGTTTCGAAATTTGAAAAACAAACGCGAT  
 TATCATAAATATAGGCACAATGTGTCATGGCTATATTTATCTCGTCTCTGCCATGAAGGAATTTGCCT  
 ATATGAAGGCATTGTATGAGAGGAAATTTCCAGTTCCAAAGCCAATTGATTACAATCGTCATGCAGTGGT  
 CATGGAACCTATAAATGGTTATCCACTATGTCAGATACACCATGTTGAAGATCCTGCATCAGTATATGAT  
 GAAGCTATGGAACATAATTGTCAAACCTGCAAAATCATGGGCTGATTCATGGAGATTTAATGAATTTAATC  
 TCATTTTGGATGAAAGTGACCATATCACCATGATTGATTTTCCACAGATGGTTTCAACTTCTCATCCCAA  
 TGCTGAGTGGTATTTTGACAGAGATGTTAAATGCATTAAGATTTCTTTATGAAACGTTTTCAGCTACGAA  
 AGTGAGCTTTTTCCAACCTTTAAGGATATCAGGAGAGAAGACACTCTTGATGTGGAGGTTTCTGCCAGTG  
 GCTACACAAAGGAAATGCAGGCAGATGATGAACTGCTTCCATTAGGTCCAGATGATAAAAAATTTGA  
 AACAAAAGAGGGATCTGAATTCATTTTCAGATGGAGAAGTGGCAGAAAAAGCAGAGGTTTACGGGTCA  
 GAAAATGAAAGTGAACGGAACCTGTCTAGAAGAATCAGAGGGCTGCTATTGCAGATCATCTGGAGACCCCTG  
 AACAAATAAAGGAAGACAGTTTATCAGAAGAGAGTGTGATGCACGGAGTTTTGAAATGACTGAATTCAA  
 TCAAGCTTTAGAAGAAATAAAGGGCAGGTTGTTGAAAACAACCTGTAACCTGAATTTTCTGAGGAGAAA  
 AACAGAACTGAAAATTACAACAGGCAAGATGGTCAGAGAGTTCAAGGAGGAGTCCCTGCTGGCTCTGACG  
 AGTATGAAGATGAATGCCCTCATCTAATTGCCTTGTGTCATTAATAGAGAATTCAGGCCTTTCAGAGA  
 TGAAGAAAATGTGGGAGCTATGAATCAGTATAGAACAAGAACCTGAGTATCACTTCTTCAGGCAGTGTCT  
 GTAAGCTGTTCAACAATTCCTCCAGAAGTGGTAAACAGAAGGTGAAACGTCAGTTGACAAAACAGCAAA  
 AATCAGCTGTGACGCTGATTGCAGAAAGGAGAAGCAAAATATTTACCAAGCAACGTAGGGAAAAACAT  
 GCAAAATATCAAATCAAGTTTGAAGCAGCCAGCTTTTGGGGAGAA

**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATTAAGTTTAA**

**Protein Sequence:**

>RC201484 protein sequence  
 Red=Cloning site Green=Tags(s)

MKVNVAKLRYMSRDDFRVLTAVEMGMKNHEIVPGSLIASIASLKHGGCNKVLRELVKHKLIAWERTKTV  
 QGYRLTNAGYDYLALKTLSSRQVVESVGNQMGVKGESDIYIVANEEGQFALKLHRLGRSFRNLKMKRD  
 YHKYRHNVSWL YLSRLSAMKEFAYMKALYERKFPVPKPIDYNRHAVVMELINGYPLCQIHHVEDPASVYD  
 EAMELIVKLANHGLIHGDFNEFNLILDESDHITMIDFPQMVSTSHPNAEWYFDRDVKCIKDFFMKRFSEY  
 SELFPTFKDIRREDTLDVEVSASGYTKEMQADDELLHPLGPDKNIEKGESEFSFDGEVAEKAIEVYGS  
 ENESERNCLSEEGCYCRSSGDPEQIKEDSLSEESADARSFEMTEFNQALEEIKGQVVENNSVTEFSEEK  
 NRTENYNRQDQGRVQGGVPAGSDEYEDECPHLIALSSLNREFRPFDEENVGAMNQYRTRTLSITSSGSA  
 VSCSTIPPELVKQKVKRQLTKQKSAVRRRLQKGEANIFTKQRRENMQNIKSSLEAASFWE

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6196\\_b09.zip](https://cdn.origene.com/chromatograms/mk6196_b09.zip)

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_018343

**ORF Size:** 1656 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\\_018343.3](#)

**RefSeq Size:** 3980 bp

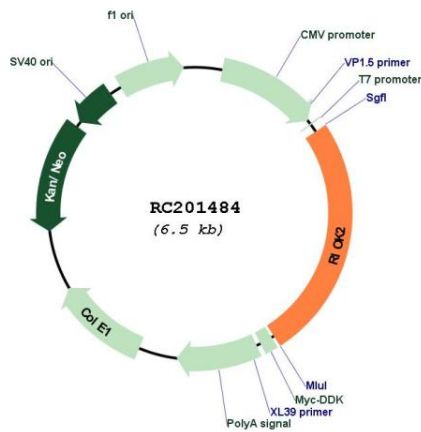
**RefSeq ORF:** 1659 bp

**Locus ID:** 55781

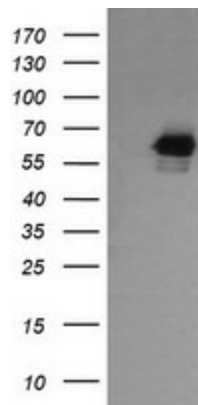
**UniProt ID:** [Q9BVS4](#)

<b>Cytogenetics:</b>	5q15
<b>Domains:</b>	RIO
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>MW:</b>	63.3 kDa
<b>Gene Summary:</b>	Serine/threonine-protein kinase involved in the final steps of cytoplasmic maturation of the 40S ribosomal subunit. Involved in export of the 40S pre-ribosome particles (pre-40S) from the nucleus to the cytoplasm. Its kinase activity is required for the release of NOB1, PNO1 and LTV1 from the late pre-40S and the processing of 18S-E pre-rRNA to the mature 18S rRNA (PubMed:19564402). Regulates the timing of the metaphase-anaphase transition during mitotic progression, and its phosphorylation, most likely by PLK1, regulates this function (PubMed:21880710).[UniProtKB/Swiss-Prot Function]

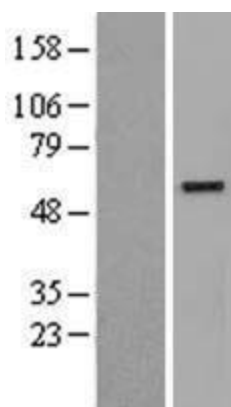
### Product images:



Circular map for RC201484



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RIOK2 (Cat# RC201484, 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-RIOK2 (Cat# [TA505140]). Positive lysates [LY402668] (100ug) and [LC402668] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY402668]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201484 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).