

## Product datasheet for **RC239520**

### **MSK2 / RSK-B (RPS6KA4) (NM\_001300802) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MSK2 / RSK-B (RPS6KA4) (NM_001300802) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RPS6KA4
Synonyms:	MSK2; RSK-B; S6K-alpha-4
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC239520 representing NM\_001300802  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGGGACGAGGACGACGATGAGAGCTGCGCCGTGGAGCTGCGGATCACAGAAGCCAACCTGACCGGGC  
 ACGAGGAGAAGGTGAGCGTGGAGAACTTCGAGCTGCTCAAGGTGCTGGGCACGGGAGCCTACGGCAAGGT  
 GTTCTGGTGCAGGAGGCGGGCGGGCACGACGCGGGAAGCTGTACGCCATGAAGGTGCTGCGCAAGGCG  
 GCGCTGGTGCAGCGGCCAAGACGCAAGAGCACACGCGCACCGAGCGCTCGGTGCTGGAGCTGGTGCGCC  
 AGGCGCCCTTCTGGTACGCTGCACTACGCTTCCAGACGGATGCCAAGCTGCACCTCATCTGGACTA  
 TGTGAGCGGGGGAGATGTTACCCACCTCTACCAGCGCAGTACTTCAAGGAGGCTGAGGTGCGCGTG  
 TATGGGGTGAGATCGTCTGGCCCTGGAACACCTGCACAAGCTCGGCATCATTTACCGAGACCTGAAAC  
 TGGAGAATGTGCTGCTGGACTCCGAGGGCCACATTGCTCCTCACGACTTCGGGCTGAGCAAGGAGTTCCT  
 GACGGAGGAGAAAGAGCGGACCTTCTCCTTCTGTGGCACCATCGAGTACATGGCCCCGAAATCATCCGT  
 AGCAAGACGGGGCATGGCAAGGCTGTGGACTGGTGGAGCCTGGGCATCTTGCTCTTCGAGCTGCTGACGG  
 GGGCTCGCCCTTACCCTGGAGGGCGAGAGGAACACGACGGCTGAGGTGTCTCGACGGATCCTGAAGTG  
 CTCCCCTCCCTTCCCCCTCGGATCGGGCCCGTGGCGCAGGACCTGCTGCAGCGGCTGCTTTGTAAGGAT  
 CCTAAGAAGCGATTGGGCGCGGGGCCAGGGGGCACAAGAAGTCCGGAACCATCCCTTCTTCCAGGGCC  
 TCGATTGGGTGGCTCGGCTGCCAGGAAGATCCAGCCCCATCCGGCCCCAAATCCGCTCAGAGCTGGA  
 TGTGGCAACTTTGCGGAGGAATCACTCGGCTGGAGCCTGTCTACTACCCCTGGCAGCCCCCACT  
 GGGGACCCCCGAATCTTTCAGGGATACTCTTTGTGGCACCCTCATTCTCTTTGACCACAACAACGCGG  
 TGATGCCAGTGGGCTGGAAGCGCCTGGTGTGGAGACCGGCCAGGTCCGGCAGCGGTGGCCAGGAGCGC  
 TATGATGCAGTACGAGCTGGACCTGCGGGAGCCTGCGCTGGGCCAGGGCAGCTTTTCTGTGTGTCGCGCG  
 TGCCGCCAGCGCCAGAGCGGCCAGGAGTTCGACGTCAGATCCTCAGTCGAGGCTGGAGGCGAACACGC  
 AGCGCGAAGTGGCTGCCCTGCGCCTGTGCCAGTACACCCCAACGTGGTGAATCTGCACGAGGTGCATCA  
 CGACCAGCTGCACACGTACCTGGTCTGGAGCTGCTGCGGGCGGGGAGCTGCTGGAGCACATCCGCAAG  
 AAGCGCACTTCAGCGAGTCGGAAGCAAGCCAGATCCTGCGCAGCCTCGTGTCCGCCGTGAGCTTCATGC  
 ACGAGGAGGGGGCGTGGTGCACCGCGACCTCAAGCCGGAACATCCTGTACGCCGACGACACGCCCGG  
 GGCCCCGGTGAAATCATCGACTTCGGGTTGCGCGGTTGCGGCCGAGAGTCCCGGGGTGCCATGCAG  
 ACGCCCTGCTTACGCTGCAGTACGCTGCCCCGAGCTGCTGGCGCAGCAGGGCTACGACGAGTCTGCG  
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 CCAGGGCGGGCAGAGCCAGGCGGCCGAGATCATGTGAAAATCCGCGAGGGGGCGTTCTCCCTTGACGGG  
 GAGGCTGGCAGGGTGTATCCGAGGAAGCCAAGGAGCTGGTCCGAGGGCTCCTGACCGTGGACCCCGCCA  
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 GCTCCGGACGCCGACGTGCTCGAGTCTCTGGGCCCGCAGTGCCTCGGGTCTCAACGCCACCTTCATG  
 GCATTCAACCGGGGAAGCGGGAGGGCTTCTTCTGAAGAGCGTGGAGAATGCACCCCTGGCCAAGCGGC  
 GGAAGCAGAAGCTGCGGAGCGCCACCGCCTCCCGCCGGGGCTCCCTGCACCAGCCAACCCGGGCCGAGC  
 CCCCCTCGCTCAAAGGGGCCCCCGCGAGCCAACGGCCCCCTGCCCCCTCC

**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC239520 representing NM\_001300802  
 Red=Cloning site Green=Tags(s)

MGDEDDDESCAVELRITEANLTGHEEKVSVENFELLKVLGTGAYGKVFLVRKAGGHDAGKLYAMKVLRKA  
 ALVQRAKTQEHTRTERSLELVRQAPFLVTLHYAFQTDAKLHLILDYVSGGEMFTHLYQRQYFKEAEVRV  
 YGGEIVLALALEHLKLGIIYRDLKLENVLLDSEGHIVL TDFGLSKEFLTEEKERTFSFCGTIEYMAPEIIR  
 SKTGHGKAVDWWSLGILLFELLTGASPFLEGERNTQAEVSRRIKCSPPFPPIRIGPVAQDLLQRLLCKD  
 PKKRLGAGPQGAQEVNRHPFFQGLDWVALAARKIPAPFRPQIRSELDVGNFAEEFTRLEPVYSPPGSPPP  
 GDPRIFFQGYSFVAPSILFDHNNVMTDGL EAPGAGDRPGRAAVARSAMMQYELDLREPALGQGSFSVCRR  
 CRQRQSGQEFVAVKILSRREANTQREVAALRLCQSHPNVNLHEVHHDQLHTYLVLELLRGGELLEHIRK  
 KRHFSESEASQILRSLVSAVSMHEEAGVVHRDLKPENILYADDTGAPVKIIDFGFARLRPQSPGVPMQ  
 TPCFTLQYAAPELLAQQGYDESCDLWSLGVILYMLL SGQVPFQGASGQGGQSQA AEIMCKIREGRFSLDG  
 EAWQGVSEAEKELVRGLLTVDPAKRLKLEGLRGSSWLQDGSARSSPPLRTPDVLESSGPAVRSGLNATFM  
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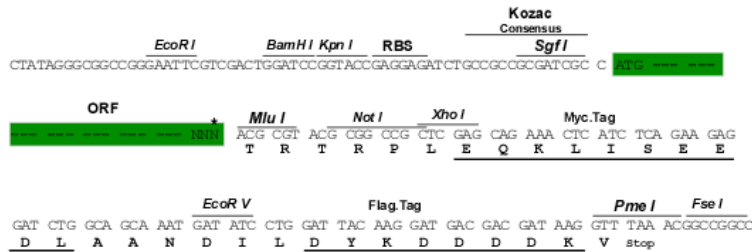
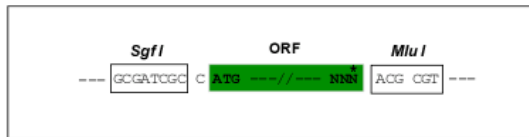
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

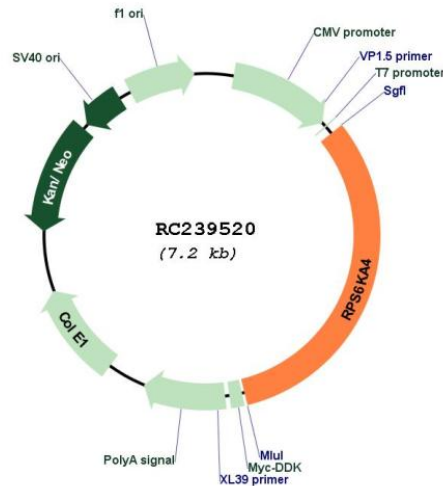
SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_001300802

**ORF Size:** 2295 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\\_001300802.2](#)

**RefSeq Size:** 3128 bp

**RefSeq ORF:** 2298 bp

**Locus ID:** 8986

UniProt ID: [O75676](#)

Cytogenetics: 11q13.1

Protein Families: Druggable Genome, Protein Kinase, Transcription Factors

Protein Pathways: MAPK signaling pathway, Neurotrophin signaling pathway

MW: 85.2 kDa

**Gene Summary:** This gene encodes a member of the RSK (ribosomal S6 kinase) family of serine/threonine kinases. This kinase contains 2 non-identical kinase catalytic domains and phosphorylates various substrates, including CREB1 and ATF1. The encoded protein can also phosphorylate histone H3 to regulate certain inflammatory genes. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2016]