

Product datasheet for **RC212570**

MSK2 / RSK-B (RPS6KA4) (NM_003942) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MSK2 / RSK-B (RPS6KA4) (NM_003942) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MSK2 / RSK-B
Synonyms:	MSK2; RSK-B; S6K-alpha-4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC212570 representing NM_003942
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGGACGAGGACGACGATGAGAGCTGCGCCGTGGAGCTGCGGATCACAGAAGCCAACCTGACCGGGC
 ACGAGGAGAAGGTGAGCGTGGAGAACTTCGAGCTGCTCAAGGTGCTGGGCACGGGAGCCTACGGCAAGGT
 GTTCTGTGTGCGAAGGCGGGCGGGCACGACGCGGGAAGCTGTACGCCATGAAGGTGCTGCGCAAGGCG
 GCGCTGTTGACGCGCCAAAGACGCAAGAGCACACGCGCACCGAGCGCTCGGTGCTGGAGCTGGTGCGCC
 AGGCGCCCTTCTGGTACGCTGCACTACGCTTCCAGACGGATGCCAAGCTGCACCTCATCCTGGACTA
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 TGGAGAATGTGCTGCTGGACTCCGAGGGCCACATTGCTCCTCACGACTTCGGGCTGAGCAAGGAGTTCCT
 GACGGAGGAGAAAGAGCGGACCTTCTCCTTCTGTGGCACCATCGAGTACATGGCCCCGAAATCATCCGT
 AGCAAGACGGGGCATGGCAAGGCTGTGGACTGGTGGAGCCTGGGCATCTTGCTCTTCGAGCTGCTGACGG
 GGGCTCGCCCTTACCCTGGAGGGCGAGAGGAACACGACGGCTGAGGTGTCTCGACGGATCCTGAAGTG
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 TCGATTGGGTGGCTCTGGCTGCCAGGAAGATCCAGCCCCATCCGGCCCCAAATCCGCTCAGAGCTGGA
 TGTGGCAACTTTGCGGAGGAATCACTCGGCTGGAGCCTGTCTACTACCCCTGGCAGCCCCCACT
 GGGGACCCCGAATCTTTCAGGGATACTCTTTGTGGCACCCTCATTCTCTTTGACCACAACAACGCGG
 TGATGACCGATGGGCTGGAAGCGCTGGTGTGGAGACCAGGCGAGTGGGCAGCGGTGGCCAGGACGCG
 TATGATGCAGGACTCGCCCTTCTCCAGCAGTACGAGCTGGACCTGCGGGAGCCTGCGCTGGGCCAGGGC
 AGCTTTTCTGTGTGTCGCGCTGCGCCAGCGCCAGAGCGGCCAGGAGTTGCGAGTCAAGATCCTCAGTC
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 CTGCTGGAGCACATCCGCAAGAAGCGGCACTTCAGCGAGTCGGAAGCAAGCCAGATCCTGCGCAGCCTCG
 TGTGCGCCGTGAGCTTATGCACGAGGAGGCGGGCGTGGTGCACCGGACCTCAAGCCGGAACATCCT
 GTACGCCGACGACACGCCCGGGCCCGGTGAAAATCATCGACTTCGGGTTGCGCGGTTGCGGCCGAG
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 CCCCTTCCAGGGGCTCTGGCCAGGGCGGGCAGAGCCAGGCGGCCGAGATCATGTGCAAAATCCGCGAG
 GGGCGCTTCTCCCTTGACGGGGAGGCTGGCAGGGTGTATCCGAGGAAGCCAAGGAGCTGGTCCGAGGGC
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 GGTCTCAACGCCACCTTATGGCATTCAACCGGGCAAGCGGGAGGGCTTCTTCTGAAGAGCGTGGAGA
 ATGCACCCCTGGCAAGCGGCGGAAGCAGAAGCTGCGGAGCGCCACCCTCCCGCGGGGCTCCCTGC
 ACCAGCCAACCGGGCCGAGCCCCGCTCGCTCCAAGGGGCCCCCGCCGAGCCAACGGCCCCCTGCC
 CCCTCC

ACGCGTACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC212570 representing NM_003942
Red=Cloning site Green=Tags(s)

MGDEDDDESCAVELRITEANLTGHEEKVSVENFELLKVLGTGAYGKVFLVRKAGGHDAGKLYAMKVLRKA
ALVQRAKTQEHTRTERSVLELVRQAPFLVTLHYAFQTDAKLHLILDYVSGGEMFTHLYQRQYFKEAEVRV
YGG EIVL ALEHLHKLGI IYRDLKLENVLLDSEGHIVL TDFGLSKEFL TEEKERTFSFCGTIEYMAPEIIR
SKTGHGKAVDWWSL GILLFELLTGASPF TLEGERNTQAEVSRRIKCSPPFPFPRIGPVAQDLLQRLLCKD
PKKRLGAGPQGAQEVNRHPFFQGLDWVALAARKIPAPFRPQIRSELDVGNFAEEFTRLEPVYSPPGSPPP
GDPRI FQGY SFVAPSILFDHNNVMTDGLEAPGAGDRPGRAAVARSAMMQDSPFFQYELDLREPALGQG
SFSVCRRCRQRQSGQEF AVKILSRRLEANTQREVAALRLCQSHPNVNLHEVHHDQLHTYLVLELLRGGE
LLEHIRKKRHFSESEASQILRSLVSAVSMHEEAGVVHRDLKPENILYADDTPGAPVKIIDFGFARLRPQ
SPGVPMQTPCFTLQYAAPELLAQGYDESCDLWSLGVILYMMLSGQVPPFQGASGQGGQSAAEIMCKIRE
GRFSLDGEAWQGVSEEAKELVRLTVDPAKRLKLEGLRGSSWLQDGSARSSPPLRTPDVLESSGPAVRS
GLNATFMAFNRGKREGFFLKSVENAPLAKRRKQKLRSATASRRGSPAPANPGRAPVASKGAPRRANGPLP
PS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6104_e07.zip

Restriction Sites: Sgfl-Mlul

Cloning Scheme:


ACCN: NM_003942

ORF Size: 2316 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_003942.3](#)

RefSeq Size: 3149 bp

RefSeq ORF: 2319 bp

Locus ID: 8986

UniProt ID: [O75676](#)

Cytogenetics: 11q13.1

Domains: pkinase, S_TK_X

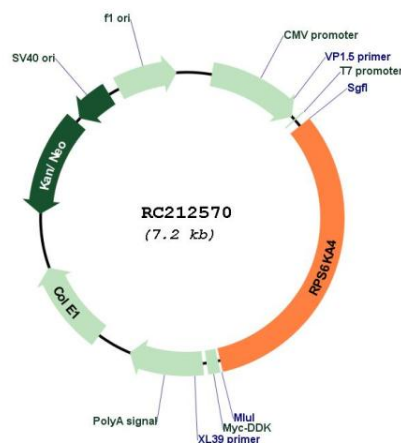
Protein Families: Druggable Genome, Protein Kinase, Transcription Factors

Protein Pathways: MAPK signaling pathway, Neurotrophin signaling pathway

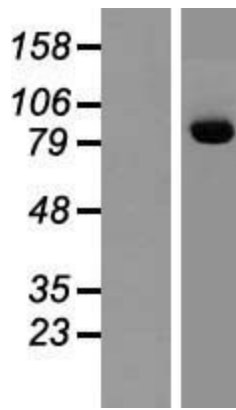
MW: 85.4 kDa

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]

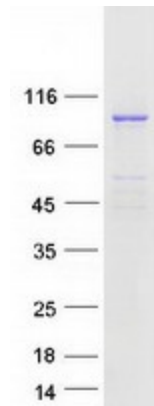
Product images:



Circular map for RC212570



Western blot validation of overexpression lysate (Cat# [LY418335]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212570 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RPS6KA4 protein (Cat# [TP312570]). The protein was produced from HEK293T cells transfected with RPS6KA4 cDNA clone (Cat# RC212570) using MegaTran 2.0 (Cat# [TT210002]).