

## Product datasheet for **RC213645**

### **RPS6KA3 (NM\_004586) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RPS6KA3 (NM_004586) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RPS6KA3
Synonyms:	CLS; HU-3; ISPK-1; MAPKAPK1B; MRX19; p90-RSK2; pp90RSK2; RSK; RSK2; S6K-alpha3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC213645 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCCGCTGGCGCAGCTGGCGGACCCGTGGCAGAAGATGGCTGTGGAGAGCCCGTCCGACAGCGCTGAGA  
 ATGGACAGCAAATTATGGATGAACCTATGGGAGAGGAGGAGATTAACCCACAAACTGAAGAAGTCAGTAT  
 CAAAGAAATTGCAATCACACATCATGTAAGGAAGGACATGAAAAGGCAGATCCTTCCCAGTTTGAACCT  
 TAAAAAGTATTAGGGCAGGGATCATTTGGAAAGGTTTTCTTAGTTAAAAAATCTCAGGCTCTGATGCTA  
 GGCAGCTTTATGCCATGAAGGTTTGAAGAAGGCCACACTGAAAGTTCGAGACCGAGTTCGGACAAAAAT  
 GGAACGTGATATCTTGGTAGAGTTAATCATCCTTTTATTGTCAAGTTCATTATGCTTTTCAAAGTAA  
 GGAAGTTGTATCTTATTTGGATTTTCTCAGGGGAGGAGATTTGTTTACACGCTTATCCAAAGAGGTGA  
 TGTTACAGAAGAAGATGTCAAATCTACTTGGCTGAACCTGCATTGCTTTAGACCATCTACATAGCCT  
 GGAATAATTTATAGAGACTTAAAACCAGAAAATATACTTCTTGATGAAGAAGGTCACATCAAGTTAACA  
 GATTTTCGGCCTAAGTAAAGAGTCTATTGACCATGAAAAGAAGGCATATTCTTTTTGTGAACTGTGGAGT  
 ATATGGCTCCAGAAGTAGTTAATCGTCGAGGTCATACTCAGAGTCTGACTGGTGGTCTTTTGGTGTGTT  
 AATGTTTGAATGCTTACTGGTACACTCCCTTTCCAAGGAAAAGATCGAAAAGAAAACAATGACTATGATT  
 CTTAAAGCCAACTTGGAAATGCCACAGTTTTTGGTCTGAAAGCGCAGAGTCTTTTACGAATGCTTTTCA  
 AGCGAAATCCTGCAAACAGATTAGGTGCAGGACCAGATGGAGTTGAAGAAATTAAGACATTCATTTTT  
 CTCAACGATAGACTGGAATAAAGTATAGAAGAGAAATTCATCCGCCATTTAAACCTGCAACGGGCAGG  
 CCTGAAGATACATTCTATTTGATCCTGAGTTTACTGCAAAAACCTCCAAAGATTCACCTGGCATTCCAC  
 CTAGTGCTAATGCACATCAGCTTTTTCGGGGTTTGTGTTTGTGCTATTACCTCAGATGATGAAAGCCA  
 AGCTATGCAGACAGTTGGTGTACATTCAATTGTTTCAGCAGTTACACAGGAACAGTATTCAGTTTACTGAT  
 GGATATGAAGTAAAAGAAGATATTGGAGTTGGCTCCTACTCTGTTTGAAGAGATGTATACATAAAGCTA  
 CAAACATGGAGTTTGCAGTGAAGATTATTGATAAAGCAAGAGAGACCCAAACAGAAGAAATTGAAATTCT  
 TCTTCGTTATGGACAGCATCCAAACATTACTCTAAAGGATGTATATGATGATGGAAAGTATGTGTAT  
 GTAGTAACAGAACTTATGAAAGGAGGTGAATTGCTGGATAAAATCTTAGACAAAATTTTTCTCTGAAC  
 GAGAGGCCAGTGTCTGCTTCACTATAACTAAAACCGTTGAATATCTCACGCACAAGGGGTGGTTCA  
 TAGAGACTTGAACCTAGCAACATCTTTATGTGGATGAATCTGGTAATCCGGAATCTATTCGAATTTGT  
 GATTTTGGCTTTGCAAAACAGCTGAGAGCGGAAAATGGTCTTCTCATGACTCCTTGTACTGCAAAAT  
 TTGTTGCCACCAGAGGTTTTAAAAAGACAAGGCTATGATGCTGCTTGTGATATATGGAGTCTTGGTGTCT  
 ACTCTATACAATGCTTACCGTTACTCCATTTGCAAAATGGTCTGATGATACACCAGAGGAAATATTG  
 GCACGAATAGGTAGCGGAAAATCTCACTCAGTGGTGGTACTGGAATCTGTTTCAGACACAGCAAAGG  
 ACCTGGTGTCAAAGATGCTTCAATGTAGACCCTCATCAGAGACTGACTGCTGCTTGTGCTCAGACATCC  
 TTGGATCGTCCACTGGGACCAACTGCCACAATACCAACTAAACAGACAGGATGCACCACATCTAGTAAAG  
 GGTGCCATGGCAGCTACATATTCTGCTTTGAACCGTAATCAGTCACCAGTTTTGGAACAGTAGGCCGCT  
 CTACTCTTGCTCAGCGGAGAGGTATTAATAAATCACCTCAACAGCCCTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC213645 protein sequence  
 Red=Cloning site Green=Tags(s)

MPLAQLADPWQKMAVESPSDSAENGQQIMDEPMGEEEEINPQTEEVSIKEIAITHHVKEGHEKADPSQFEL  
 LKVLGQGSFGKVFLVKKISGSDARQLYAMKVLKKATLKVRDRVRTKMERDILVEVNHPFIVKLHYAFQTE  
 GKLYLILDFLRGGDLFTRL SKEVMFTEEDVKFYLAELALALDHLHSLGIIYRDLKPENILLDEEGHIKLT  
 DFGLSKESIDHEKKAYSFCGTVEYMAPEVVNRRGHTQSADWWSFGVLMFEMLTGTLFPQGKDRKETMTMI  
 LKAKLGMPQFLSPEAQSLRMLFKRNPANRLGAGPDGVVEIKRHSFFSTIDWNKLYRREIHPPFKPATGR  
 PEDTFYDFPEFTAKTPKDSPIPPSANAHQLFRGFSVAITSDDESQAMQTVGVHSIVQQLHRNSIQFTD  
 GYEVKEDI GVGSYVCKRCIHKATNMEFAVKIIDKSKRDPTEEIEILLRYGQHPNIIITLKDYYDDGKYVY  
 VVTELMKGGELLDKILRQKFFSEREASAVLFTITKTVEYLHAQGVVHRDLKPSNIIYVDESGNPESIRIC  
 DFGFAKQLRAENGLLMTPCYTANFVAPEVLKRQGYDAACDIWSLVLLYMLTGYTPFANGPDDTPEEIL  
 ARIGSGKFSLSGGYWNSVSDTAKDLVSKMLHVDPHQRLTAALVLRHPWIVHWDQLPQYQLNRQDAPHLVK  
 GAMAATYSALNRNQSPVLEPVGRSTLAQRRGIKKTSTAL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mk6451\\_h07.zip](https://cdn.origene.com/chromatograms/mk6451_h07.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



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

ACCN: NM\_004586

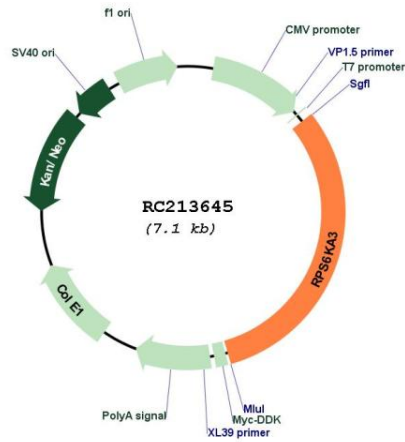
ORF Size: 2220 bp

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](#)

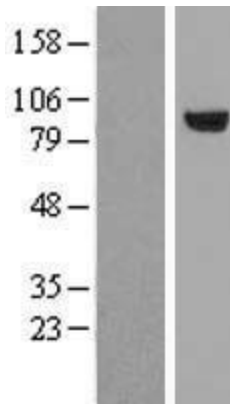
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_004586.3</a>
<b>RefSeq Size:</b>	7723 bp
<b>RefSeq ORF:</b>	2223 bp
<b>Locus ID:</b>	6197
<b>UniProt ID:</b>	<a href="#">P51812</a>
<b>Cytogenetics:</b>	Xp22.12
<b>Domains:</b>	pkinase, S_TK_X, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	Long-term potentiation, MAPK signaling pathway, mTOR signaling pathway, Neurotrophin signaling pathway, Oocyte meiosis, Progesterone-mediated oocyte maturation
<b>MW:</b>	83.7 kDa
<b>Gene Summary:</b>	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 members of the mitogen-activated kinase (MAPK) signalling pathway. The activity of this protein has been implicated in controlling cell growth and differentiation. Mutations in this gene have been associated with Coffin-Lowry syndrome (CLS). [provided by RefSeq, Jul 2008]

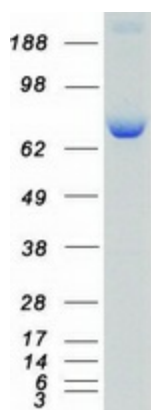
Product images:



Circular map for RC213645



Western blot validation of overexpression lysate (Cat# [LY417887]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213645 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RPS6KA3 protein (Cat# [TP313645]). The protein was produced from HEK293T cells transfected with RPS6KA3 cDNA clone (Cat# RC213645) using MegaTran 2.0 (Cat# [TT210002]).