

Product datasheet for **RG214993**

PERK (EIF2AK3) (NM_004836) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PERK (EIF2AK3) (NM_004836) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PERK
Synonyms:	PEK; PERK; WRS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG214993 representing NM_004836 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGCGCGCCATCAGCCCGGGGCTGCTGGTACGGGCGCTGCTGCTGCTGCTGCTGCTGCTGGGGCTCG
CGGCAAGGACGGTGGCCGCGGGGCGGCCGCTGGCCTCCAGCGCCGACGGCGGAGGCGGCTTCGGCT
CGGGGCGGCCGCTGCTCCACCTCAGCGACGCGAGTACCGGCGGGGCGGCCGCTGGCTGCGGCCGAGGTG
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ATGAGACAGAGTTGCGACCGCGCGCAGGTCATTAGTAATTATCAGCACTTTAGATGGGAGAATTGCTGC
CTTGATCCTGAAAATCATGGTAAAAAGCAGTGGGATTTGGATGTGGATCCGGTTCCTTGGTGTATCC
AGCCTTAGCAAACAGAGGTATTTGGGAATAAGATGATCATTCCCTCCCTGGATGGAGCCCTCTCCAGT
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AAACGAAGCACACAGATTACAGTCAGATTCCCTCGACAACCCACATTACAACAAGAATATCCGCAAAAAGG
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 AAGTGGACATCTTTCTTTAGGCCTGATTCTATTTGAATTGCTGTATCCATTGCACTCAGACTGAGGAGAG
 AGTCAAGGACCTTAACTGATGTAAGAAATCTCAAATTTCCACCATTATTTACTCAGAAAATCTCCTGTGAG
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 ATGCTGTATTTGAGGACTTGACTTTCCAGGAAAAACAGTCTCAGACAGAGGTCTCGCTCCTTGAGTTC
 ATCGGGAACAAAACATCAAGACAGTCCAACTCCCATAGCCCTTTGCCAAGCAAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG214993 representing NM_004836
 Red=Cloning site Green=Tags(s)

MERAI SPGLLV RALL LLLLLLGLAARTVAAGRARGLPAPTAEAAFGLGAAAAPTSATRVPAAGAVAAAEV
 TVEDAEALPAAAGEQEPRGPEPDETEL RPRGRSLVII STLDGRIAALDPENHGKKQWDL DVGSGSLVSS
 SL SKPEVFGNKMII PSLDGALFQWRDRESMETVPFTVESLLESSYKFGDDVVL VGGKSL TTYGLSAYSG
 KVR YICSALGCRQWDSDEMEQEEDILLQRTQKT VRAVGPRSGNEKWNF SVGHFELRYIPDMETRAGFIE
 STF KPNENTEESKII SDVEEQEAAIMDIVIKVSVADWKVMAF SKKGGHLEWEYQFCTPIASAWLLKDGKV
 IPI SLFDDTSYTSNDDVLEDEEDIVEAARGATENS VYLGMYRQLYLQSSVRISEKFPSSPKALESVTNE
 NAI IPLPTIKWKPLIHSPSRTPVLVGSDEFDKCLSNDFKFSHEEYSNGALSILQYPYDNGYYLPYYKRERN
 KRSTQITVRFLDNPHYNKNIRKKDPVLLHWWKEIVATILFCIIATTFIVRRLFPHPHRQRKESETQCQ
 TENKYDSVSGEANDSSWNDIKNSGYISRYL TDFEPIQCLGRGGFVVFEAKNKVDDCNYA IKRIRLPNRE
 LAREKVMREVKALAKLEHPGIVRYFNAWLEAPPEKWQEKMDIWLKDESTDWPLSSPSPMDAPSVKIRRM
 DPFSTKEHIEIIAPSPQRSRSF SVGISCDQTSSESQSPLFESGMDHEDISESVDAAAYNLQDSCLTDCD
 VEDGTM DGNDEGHSFELCPSEASPYVRSRERTSSSIVFEDSGCDNASSKEEPKTNRLHIGNHCANKLTAF
 KPTSSKSSSEATLSI SPPRPPTLSLDLTKNTEK LQPSSPKVYL YIQMLCRKENLKDWMNGRCTIEERE
 RSVCLHIFLQIAEAVEFLH SKGLMHRDLKPSNIFF TMDDVVKVGD FGLVTAMDQDEEQVLT PMPAYAR
 HTGQVGT KLYMSPEQIHGNSYSHKVDIFSLGLILFELL YPFSTQMERVRTLTDVRNLKFPPLFTQKYPCE
 YVMQDMLSPSPMERPEAINI IENAVFEDLDFPGKTVLRQRSRLSSSGTKHSRQSNNSHSPSPSN

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_004836

ORF Size: 3348 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 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](#)

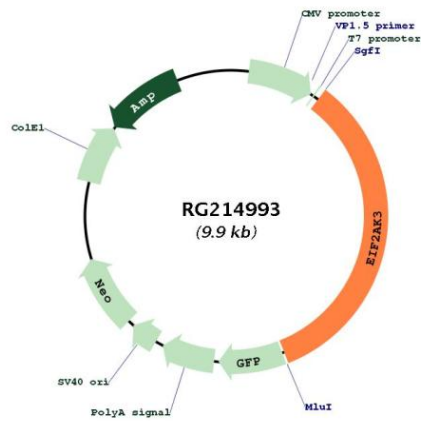
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_004836.3 , NP_004827.3
RefSeq Size:	4511 bp
RefSeq ORF:	3351 bp
Locus ID:	9451
UniProt ID:	Q9NZJ5
Cytogenetics:	2p11.2
Domains:	pkinase, TyrKc, S_TKc, PQQ
Protein Families:	Druggable Genome, Protein Kinase, Secreted Protein, Transmembrane
Protein Pathways:	Alzheimer's disease
Gene Summary:	The protein encoded by this gene phosphorylates the alpha subunit of eukaryotic translation-initiation factor 2, leading to its inactivation, and thus to a rapid reduction of translational initiation and repression of global protein synthesis. This protein is thought to modulate mitochondrial function. It is a type I membrane protein located in the endoplasmic reticulum (ER), where it is induced by ER stress caused by malformed proteins. Mutations in this gene are associated with Wolcott-Rallison syndrome. [provided by RefSeq, Sep 2015]

Product images:



Circular map for RG214993