

Product datasheet for SC323503

PERK (EIF2AK3) (NM_004836) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PERK (EIF2AK3) (NM_004836) Human Untagged Clone
Tag:	Tag Free
Symbol:	PERK
Synonyms:	PEK; PERK; WRS
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC323503 sequence for NM_004836 edited (data generated by NextGen Sequencing)

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ATGGAGCGGCCATCAGCCCggggCTGCTGGTACGGGCGTCTGCTGCTGCTGCTGCTGCT
CTGGGGCTCGCGCAAGGACGGTGGCCGGGGCGGCCCGTGGCTCCCAGCGCGACG
GCGGAGGCGGCGTTCCGGCTCGGGCGGGCCGCTGCTCCCACCTCAGCGACGCGAGTACC
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GCCGCGGAGAGCAGGAGCCTCGGGTCCGGAACCAGACGATGAGACAGAGTTGCGACCG
CGGGCAGGTCATTAGTAATTATCAGCACTTTAGATGGGAGAATTGCTGCCTTGGATCCT
GAAAATCATGGTAAAAAGCAGTGGGATTTGGATGTGGGATCCGGTTCTTGGTGCATCC
AGCCTTAGCAAACAGAGGTATTTGGGAATAAGATGATCATTCTTCCTGGATGGAGCC
CTCTTCCAGTGGGACCGAGACC GTGAAAGCATGGAACAGTTCTTTCCAGTTGAATCA
TTCTTGAATCTTCTTATAAATTTGGAGATGATGTGTTTTGGTTGGAGGAAAATCTCTG
ACTACATATGGACTCAGTGCATATAGTGAAAGGTGAGGTATATCTGTTCACTCTGGGT
TGTCGCCAATGGGATAGTGACGAAATGGAACAAGAGGAAGACATCCTGCTTCTACAGCGT
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TATCTACCATACTACAAGAGGGAGAGGAACAAACGAAGCACACAGATTACAGTCAGATTC
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CTCGACAACCCACATTACAACAAGAATATCCGCAAAAAGGATCCTGTTCTTCTTTTACAC
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 CACACAGGACAAGTAGGGACAAACTGTATATGAGCCCAGAGCAGATTGAAACAGC
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 TTCAGCACTCAGATGGAGAGAGTACAGGACCTTAACTGATGTAAGAAATCTCAAATTTCCA
 CCATTATTTACTCAGAAATATCCTTGTGAGTACGTGATGGTTCAAGACATGCTCTCTCCA
 TCCCCATGGAACGACCTGAAGCTATAAACATCATTGAAAATGCTGTATTTGAGGACTTG
 GACTTTCCAGGAAAAACAGTGTCTCAGACAGAGGTCTCGCTCCTTGAGTTCATCGGGAACA
 AAACATCAAGACAGTCCAACAACCTCCCATAGCCCTTTGCCAAGCAATTAG

Clone variation with respect to NM_004836.5
 497 a=>g;1865 a=>t;2110 g=>t

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_004836 unedited
 ACCGCCGTTTGGAGCAACTGGGCGGTAGGCGCTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAG
 TGAACCGTCAGAAATTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGCCGGGCTGAG
 ACGTGGCCAGGGAAACACGGCTGGCTGTCCAGGCCGTCGGGCGGCAAGTGGGTCCCTAGCACGTCCTTG
 CCTTCTTGGGAGCTCCAAGCGGGGGAGAGGACAGGCGTCAAGTGGCTGCGCCTCCATGCCTGCGCGGGGG
 CGGGACGCTGATGGAGCGGCCATCAGCCCGGGGCTGCTGGTACGGGCGCTGCTGCTGCTGCTGCTG
 CTGGGGCTCGCGGCAAGGACGGTGGCCCGGGGCGGCCGCTGGCCCTCCAGCGCCGACCGGGCGGAA
 GCGGGCTTTCGGCCCTCGGGGCGGGCGCTGCTTCCACCTCAGCGACGCGAGTCCCGGGCGGGCGGCC
 GGGGCTGCGCCGAGGTGACTTGGGAGAACCAGGCTTCCGGAACGGGGAAACCAGGACCTCGGGTTCG

Kinase Domain Sequence:

>SC323503 kinase domain raw sequence. By performing [BLASTX](#) analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation
 AWTMCGATATCTACTGATTTTGGCCATTCAATGCCTGGGACGTGGTGGCTTTGGAGTTGTTTTGAAGC
 TAAAAACAAAGTAGATGACTGCAATTATGCTATCATGAGGATCCGTCTCCCAATAGGGAATTGGCTCGG
 GAAAAGGTAATGCGAGAAGTTAAAGCCTTAGCCAAGCTTGAACACCCGGGCATTGTTAGATATTTCAATG
 CCTGGCTCGAAGCACCACCAGAGAAGTGCAAGAAAAGATGGATG

Restriction Sites:

Please inquire

ACCN:	NM_004836
Insert Size:	4280 bp
OTI Disclaimer:	<p>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.</p> <p>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</p>
OTI Annotation:	<p>This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell, 2008 May p536-548.</p>
Components:	<p>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).</p>
Reconstitution Method:	<ol style="list-style-type: none">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]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.