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Product datasheet for SC316416

cGKI (PRKG1) (NM_001098512) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	cGKI (PRKG1) (NM_001098512) Human Untagged Clone
Tag:	Tag Free
Symbol:	cGKI
Synonyms:	AAT8; cGK; cGK 1; cGK1; cGKI; cGKI-alpha; cGKI-BETA; PKG; PKG1; PRKG1B; PRKGR1B
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Neo
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

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>OriGene sequence for NM_001098512 edited
ATGAGCGAGCTAGAGGAAGACTTTGCCAAGATTCTCATGCTCAAGGAGGAGAGGATCAAA
GAGCTGGAGAAGCGGCTGTCAGAGAAGGAGGAAGAAATTCAGGAGCTGAAGAGGAAACTC
CACAAATGCCAGTCGGTGCTCCCAGTGCCCTCGACCCACATCGGCCCCCGGACCACCCGG
GCGCAGGGCATCTCGGCCGAGCCGCAGACGTACAGGTCCTTCCACGACCTCCGACAGGCA
TTCCGGAAGTTCACCAAGTCCGAAAGGTCCAAGGATCTTATAAAGGAAGCTATCCTTGAC
AATGACTTTATGAAGAACTTGGAGCTGTCGCAGATCCAGGAGATTGTGGATTGTATGTAC
CCGGTGGAGTATGGCAAGGACAGTTGCATCATCAAAGAAGGAGACGTGGGGTCACTGGTG
TATGTCATGGAAGATGGTAAGGTTGAAGTTACAAAAGAAGGTGTGAAGTTGTGTACCATG
GGTCCAGGAAAAGTGTTTGGGGAATTGGCTATTCTTTACAACTGTACCCGGACAGCGACC
GTCAAGACTCTTGTAAATGTAAAACTCTGGGCCATTGATCGACAATGTTTTCAAACAATA
ATGATGAGGACAGGACTCATCAAGCATACCGAGTATATGGAATTTTTAAAAAGCGTTCCA
ACATTCCAGAGCCTTCCTGAAGAGATCCTCAGCAAGCTTGCTGATGTCCTTGAAGAGACC
CACTATGAAAATGGAGAATATATTATCAGGCAAGGTGCAAGAGGGGACACCTTCTTTATC
ATCAGCAAAGGAACGGTAAATGTCACTCGTGAAGACTCACCGAGTGAAGACCCAGTCTTT
CTTAGAACTTTAGGAAAAGGAGACTGGTTTGGAGAGAAAGCCTTGCAGGGGGAAGATGTG
AGAACAGCAAACGTAATTGCTGCAGAAGCTGTAACCTGCCTTGTGATTGACAGAGACTCT
TTTAAACATTTGATTGGAGGGCTGGATGATGTTTCTAATAAAGCATATGAAGATGCAGAA
GCTAAAGCAAAATATGAAGCTGAAGCGGCTTTCTTCGCCAACCTGAAGCTGTCTGATTTC
AACATCATTGATACCCTTGGAGTTGGAGGTTTCGGACGAGTAGAACTGGTCCAGTTGAAA
AGTGAAGAATCCAAAACGTTTGCAATGAAGATTCTCAAGAAACGTCACATTGTGGACACA
AGACAGCAGGAGCACATCCGCTCAGAGAAGCAGATCATGCAGGGGGCTCATTCCGATTTC
ATAGTGAGACTGTACAGAACATTTAAGGACAGCAAATATTTGTATATGTTGATGGAAGCT
TGTCTAGGTGGAGAGCTCTGGACCATTCTCAGGGATAGAGGTTCGTTTGAAGATTCTACA
ACCAGATTTTACACAGCATGTGTGGTAGAAGCTTTTGCCTATCTGCATTCCAAAGGAATC
ATTTACAGGGACCTCAAGCCAGAAAATCTCATCCTAGATCACCGAGGTTATGCCAAACTG
GTTGATTTTGGCTTTGCAAAGAAAATAGGATTTGGAAAGAAAACATGGACTTTTTGTGGG
ACTCCAGAGTATGTAGCCCCAGAGATCATCCTGAACAAAGGCCATGACATTTCAGCCGAC
TACTGGTCACTGGGAATCCTAATGTATGAACTCCTGACTGGCAGCCCACCTTTCTCAGGC
CCAGATCCTATGAAAACCTATAACATCATATTGAGGGGGATTGACATGATAGAATTTCCA
AAGAAGATTGCCAAAAATGCTGCTAATTTAATTAAAAAACTATGCAGGGACAATCCATCA
GAAAGATTAGGGAATTTGAAAAATGGAGTAAAAGACATTCAAAAGCACAAATGGTTTGAG
GGCTTTAACTGGGAAGGCTTAAGAAAAGGTACCTTGACACCTCCTATAATACCAAGTGTT
GCATCACCCACAGACACAAGTAATTTTGACAGTTTCCCTGAGGACAACGATGAACCACCA
CCTGATGACAACTCAGGATGGGATATAGACTTCTAA
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Restriction Sites: Please inquire

ACCN: NM_001098512

Insert Size: 2000 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_001098512.1, NP_001091982.1
RefSeq Size:	3824 bp
RefSeq ORF:	2016 bp
Locus ID:	5592
UniProt ID:	Q13976
Cytogenetics:	10q11.23-q21.1
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Gap junction, Long-term depression, Olfactory transduction, Vascular smooth muscle contraction
Gene Summary:	Mammals have three different isoforms of cyclic GMP-dependent protein kinase (Ialpha, Ibeta, and II). These PRKG isoforms act as key mediators of the nitric oxide/cGMP signaling pathway and are important components of many signal transduction processes in diverse cell types. This PRKG1 gene on human chromosome 10 encodes the soluble Ialpha and Ibeta isoforms of PRKG by alternative transcript splicing. A separate gene on human chromosome 4, PRKG2, encodes the membrane-bound PRKG isoform II. The PRKG1 proteins play a central role in regulating cardiovascular and neuronal functions in addition to relaxing smooth muscle tone, preventing platelet aggregation, and modulating cell growth. This gene is most strongly expressed in all types of smooth muscle, platelets, cerebellar Purkinje cells, hippocampal neurons, and the lateral amygdala. Isoforms Ialpha and Ibeta have identical cGMP-binding and catalytic domains but differ in their leucine/isoleucine zipper and autoinhibitory sequences and therefore differ in their dimerization substrates and kinase enzyme activity. [provided by RefSeq, Sep 2011] Transcript Variant: This variant (1) encodes the shorter isoform (1; also known as alpha or 1alpha).