

Product datasheet for **RC215879**

CGK2 (PRKG2) (NM_006259) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CGK2 (PRKG2) (NM_006259) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CGK2
Synonyms:	cGK2; cGKII; PKG2; PRKGR2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC215879 representing NM_006259
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGAAATGGTTCAGTGAACCTAAACATTCTAAGCACCCAGATGGACACTCTGGGAACCTCACCCTG
 ATGCTCTGCGGAACAAGGTGACAGAGCTGGAGAGAGAGTTGAGGAGGAAGGATGCTGAGATCCAGGAGCG
 GGAGTACCATTTGAAGGAGCTGCGGGAGCAGCTGTGAAGCAGACTGTGGCCATTGCTGAACTCACAGAG
 GAGCTCCAGAACAAGTGCATCCAGCTGAACAAGCTGCAGGATGTGGTGCATATGCAGGGAGGAAGCCCGC
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 TTGCCATTTTATACAATTGTACAAGGACTGCCTCTGTGAAAGCTATTACCAATGTTAAAACATGGGCACT
 AGATCGAGAGGTATTCCAGAATAAATGAGGAGGACAGCCCAAGCTAGAGATGAACAATACAGAACTTC
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 TGGAACTATGACAAAGGAGATTACATCATTAGAGAGGGCGAGGAAGGAAGTACCTTTTTTCATTTTGGC
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 GCTCTGGAGTATATTAAGGGACAGAGGCAGCTTTGATGAACCCACCTCCAATTTCTGCGTTGCTTGTGTG
 ACAGAAGCATTGATTACCTGCATCGACTAGGTATTATCTACAGAGACTTGAAACCAGAAAACCTAATTC
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 ACGACCTGAGGATTTGATTGGAGGCTTTGCAGGCAAAATCCAACAGAAAGGCTGGGAAATCTGAAGAA
 GGAATAAATGACATTAAGAAACACAGGTGGTTAAATGGTTTTAATTGGGAGGACTGAAAGCACGGAGCC
 TTCCATCACCTTTGCAAAGAGAGCTCAAGGGACCCATAGATCACAGCTACTTTGACAAATATCCTCTGA
 AAAGGGAATGCCTCCAGATGAGCTATCAGGCTGGGATAAAGACTTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC215879 representing NM_006259
Red=Cloning site Green=Tags(s)

MGNQSVKPKHSHKHPDGHSGNLTDDALRNKVTLELERELRRKDAEIQEREYHLKELREQLSKQTVAIAELTE
 ELQNKCIQLNKLQDVVHMQGGSPQLQASPKVPLEVHRKTSGLVSLHSRRGAKAGVSAEPTTRTYDLNKKPP
 EFSFEKARVRKDSSEKKLITDALNKNQFLKRLDPQIQIKDMVECMYGRNYQQGSYI IKQGEPEGNHIFVLAE
 GRLEVFQGEKLLSSIPMWTTFGELAILYNCTRRTASVKAITNVKTWALDREVFQNI MRRTAQARDEQYRNF
 LRSVSLKLNLPEDKLTKI IDCLEVEYYDKGDYI IREGGEGSTFFILAKGKVKVTQSTEGHDQPQLIKTLQ
 KGEYFGEKALISDDVRSANIIAEENDVACLVIDRETFNQTVGTFEELQKYLEGYVANLNRDDEKRHAKRS
 MSNWKLSKALSLEMIQLKEKVARFSSSSPFQNL EIIATLGVGGFGRVELVKVKNENVAFAMK CIRKKHIV
 DTKQQEHVYSEKRILEEL CSPFIVKLYRTFKDNKYVYMLLEACLGGELWSILRDRGSFDEPTSKFCVACV
 TEAFDYHLHRLGIYRDLKPENLILDAEYGLKLVDFGFAKKIGSGQKTWTF CGTPEYVAPEVILNKGHD FS
 VDFWSL GILVYELLTGNPPFSGVDQMPTYNLILKGI EKMD FPRKI TRRPEDLIRRLCRQNPTERLGNLKN
 GINDIKKHRWLN GFNWEGLKARSLPSLQRELKGPIDHSYFDKYPPEKGMPPDEL SGWDKDF

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6203_d06.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_006259

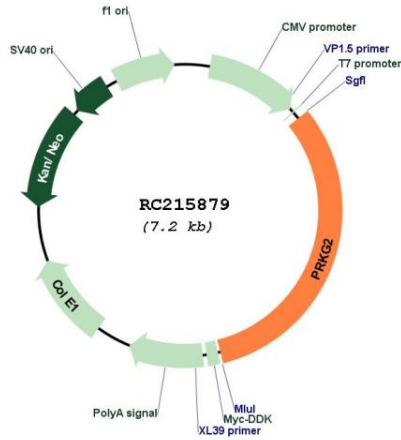
ORF Size: 2286 bp

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](#)

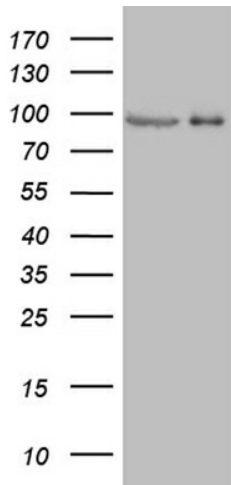
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_006259.2
RefSeq Size:	3328 bp
RefSeq ORF:	2289 bp
Locus ID:	5593
UniProt ID:	Q13237
Cytogenetics:	4q21.21
Domains:	cNMP, pkinase, S_TK_X, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Gap junction, Long-term depression, Olfactory transduction
MW:	87.3 kDa
Gene Summary:	This gene encodes a protein that belongs to the serine/threonine protein kinase family of proteins. The encoded protein binds to and inhibits the activation of several receptor tyrosine kinases. The membrane-bound protein is a regulator of intestinal secretion, bone growth and renin secretion. Alternate splicing results in multiple transcript variants encoding distinct isoforms whose regulatory N-termini differ in length but whose C-terminal catalytic domains are identical. [provided by RefSeq, May 2018]

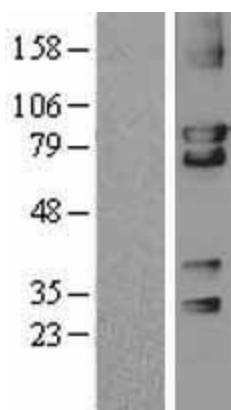
Product images:



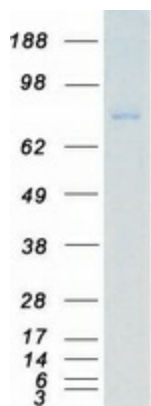
Circular map for RC215879



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PRKG2 (Cat# RC215879, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PRKG2 (Cat# [TA807705])(1:500). Positive lysates [LY401884] (100ug) and [LC401884] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401884]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215879 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PRKG2 protein (Cat# [TP315879]). The protein was produced from HEK293T cells transfected with PRKG2 cDNA clone (Cat# RC215879) using MegaTran 2.0 (Cat# [TT210002]).