

Product datasheet for **RC220877**

PRKACA (NM_207518) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PRKACA (NM_207518) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PRKACA
Synonyms:	CAFD1; PKACA; PPNAD4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC220877 representing NM_207518 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGC**

ATGGCTTCCAACCTCCAGCGATGTGAAAGAATTCTAGCCAAAGCCAAAGAAGATTTTCTTAAAAATGGG
AAAGTCCCCTCAGAACACAGCCCACTTGGATCAGTTTGAACGAATCAAGACCCTCGGCACGGGCTCCTT
CGGGCGGGTGATGCTGGTAAACACAAGGAGACCGGAACCACTATGCCATGAAGATCCTCGACAAACAG
AAGGTGGTAAACTGAAACAGATCGAACACACCCTGAATGAAAAGCGCATCCTGCAAGCTGTCAACTTTC
CGTTCCTCGTCAAACCTCGAGTTCTCCTCAAGGACAACCTCAAACCTATACATGGTCATGGAGTACGTGCC
CGGCGGGGAGATGTTCTCACACCTACGGCGGATCGGAAGGTTCACTGAGCCCCATGCCCGTTTCTACGCG
GCCAGATCGTCTGACCTTTGAGTATCTGCACTCGCTGGATCTCATCTACAGGGACCTGAAGCCGGAGA
ATCTGCTCATTGACCAGCAGGGCTACATTCAGGTGACAGACTTCGGTTTCGCCAAGCGCGTGAAGGGCCG
CACTTGGACCTTGTGCGGCACCCCTGAGTACCTGGCCCCTGAGATTATCCTGAGCAAAGGCTACAACAAG
GCCGTGGACTGGTGGCCCTGGGGTCTTATCTATGAAATGGCCGCTGGCTACCCGCCCTTCTTCGCAG
ACCAGCCCATCCAGATCTATGAGAAGATCGTCTCTGGGAAGGTGCGCTTCCCTTCCCACTTCAGCTCTGA
CTTGAAGGACCTGCTGCGGAACCTCCTGCAGGTAGATCTACCAAGCGCTTTGGGAACCTCAAGAATGGG
GTCAACGATATCAAGAACCACAAGTGGTTTGCCACAACCTGACTGGATTGCCATCTACCAGAGGAAGGTGG
AAGTCCCTTACACAAAGTTTAAAGGCCCTGGGGATACGAGTAACTTTGACGACTATGAGGAAGAAGA
AATCCGGGTCTCCATCAATGAGAAGTGTGGCAAGGAGTTTTCTGAGTTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC220877 representing NM_207518
Red=Cloning site Green=Tags(s)

MASNSSDVKEFLAKAKEDFLKKWESPAQNTAHLDQFERIKTLGTGSFGRVMLVKHKETGNHYAMKILDKQ
 KVVVCLKQIEHTLNEKRILQAVNFPFLVKLEFSFKDNSNLYMVMYVPGGEMFSLHRRIGRFSEPHARFYA
 AQIVLTFEYHLSDLIYRDLKPENLLIDQQGYIQVDFGFAKRVKGRWTWLCGTPEYLAPEIILSKGYNK
 AVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFP SHFSSDLKDLLRNLLQVDLTKRFGNLKNG
 VNDIKNHKWFATTDWIAIYQRKVEAPFIPKFKGPGDTSNFDYEEEEIRVSINEKCGKEFSEF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8014_c12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_207518

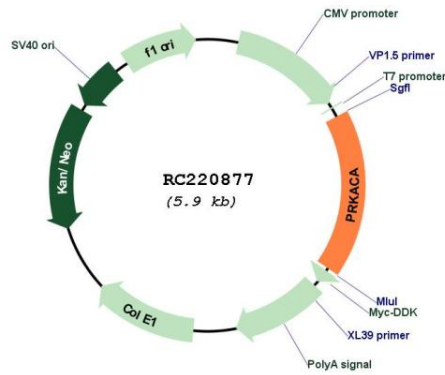
ORF Size: 1029 bp

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.

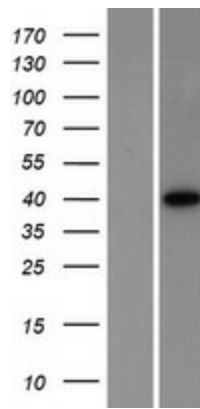
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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:	<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_207518.3
RefSeq Size:	2490 bp
RefSeq ORF:	1032 bp
Locus ID:	5566
UniProt ID:	P17612
Cytogenetics:	19p13.12
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Apoptosis, Calcium signaling pathway, Chemokine signaling pathway, Dilated cardiomyopathy, Gap junction, GnRH signaling pathway, Hedgehog signaling pathway, Insulin signaling pathway, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Olfactory transduction, Oocyte meiosis, Prion diseases, Progesterone-mediated oocyte maturation, Taste transduction, Vascular smooth muscle contraction, Vibrio cholerae infection, Wnt signaling pathway
MW:	39.6 kDa
Gene Summary:	This gene encodes one of the catalytic subunits of protein kinase A, which exists as a tetrameric holoenzyme with two regulatory subunits and two catalytic subunits, in its inactive form. cAMP causes the dissociation of the inactive holoenzyme into a dimer of regulatory subunits bound to four cAMP and two free monomeric catalytic subunits. Four different regulatory subunits and three catalytic subunits have been identified in humans. cAMP-dependent phosphorylation of proteins by protein kinase A is important to many cellular processes, including differentiation, proliferation, and apoptosis. Constitutive activation of this gene caused either by somatic mutations, or genomic duplications of regions that include this gene, have been associated with hyperplasias and adenomas of the adrenal cortex and are linked to corticotropin-independent Cushing's syndrome. Alternative splicing results in multiple transcript variants encoding different isoforms. Tissue-specific isoforms that differ at the N-terminus have been described, and these isoforms may differ in the post-translational modifications that occur at the N-terminus of some isoforms. [provided by RefSeq, Jan 2015]

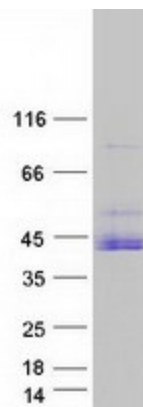
Product images:



Circular map for RC220877



Western blot validation of overexpression lysate (Cat# [LY403918]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220877 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PRKACA protein (Cat# [TP320877]). The protein was produced from HEK293T cells transfected with PRKACA cDNA clone (Cat# RC220877) using MegaTran 2.0 (Cat# [TT210002]).