

Product datasheet for RC209900

PRKAR2B (NM_002736) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PRKAR2B (NM_002736) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PRKAR2B
Synonyms:	PRKAR2; RII-BETA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC209900 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGAGCATCGAGATCCCGCGGGACTGACGGAGCTGCTGCAGGGCTTCACGGTGGAGGTGCTGAGGCACC
 AGCCCGCGGACCTGCTGGAGTTCGCTCTGCAGCACTTCACCCGCCTGCAGCAGGAGAACGAGCGCAAAGG
 CACCGCGCGCTTCTGCCATGAGGGCAGGACCTGGGGGACCTGGGCGCCGCTGCCGGGGCGGCACCCCC
 AGCAAGGGGGTCAACTTCGCCGAGGAGCCCATGCAGTCCGACTCCGAGGACGGGGAGGAGGAGGAGCGG
 CGCCCGCGGACGACGAGGGCGTTCAATGCTCCAGTAATAAACCGATTACAAAGGCGTGCCTCAGTATGTGC
 AGAAGCTTATAATCCTGATGAAGAAGAAGATGATGCAGAGTCCAGGATTATACATCCAAAACTGATGAT
 CAAAGAAATAGGTTGCAAGAGGCTTCAAAGACATCCTGCTGTTTAAGAATCTGGATCCGGAGCAGATGT
 CTCAAGTATTAGATGCCATGTTTGAAAAATTGGTCAAAGATGGGGAGCATGTAATTGATCAAGGTGACGA
 TGGTGACAACCTTTTATGTAATTGATAGAGGCACATTTGATATTTATGTGAATGTGATGGTGTGGAAGA
 TGTGTTGGTAACATGATAATCGTGGGAGTTTCGGCGAAGTGGCCTTAATGTACAATACACCCAGAGCAG
 CTACAATCACTGCTACCTCTCCTGGTGTCTGTGGGTTTGGACAGGGTAACCTTCAGGAGAATAATTGT
 GAAAAACAATGCCAAAAAGAGAAAAATGTATGAAAGCTTTATTGAGTCACTGCCATTCCTTAAATCTTTG
 GAGTTTTCTGAACGCCTGAAAGTAGTAGATGTATAGGCACCAAGTATACAACGATGGAGAACAATCA
 TTGCTCAGGGAGATTCCGCTGATTCTTTTTCATTGTAGAATCTGGAGAAGTGAAAATTACTATGAAAAAG
 AAAGGGTAAATCAGAAGTGAAGAGAATGGTGCAGTAGAAATCGCTCGATGCTCGCGGGGACAGTACTTT
 GGAGAGCTTGCCCTGGTAACATAACAACTCGAGCAGCTTCTGCCACGCCATTGGGACTGTCAAATGTT
 TAGCAATGGATGTGCAAGCATTTGAAAGCTTCTGGGACCTTGCATGGAAATTATGAAAAGGAACATCGC
 TACCTATGAAGAACAGTTAGTTGCCCTGTTTGAACGAACATGGATATTGTTGAACCCACTGCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA


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Protein Sequence: >RC209900 protein sequence
 Red=Cloning site Green=Tags(s)

MSIEIPAGL TELLQGFTVEVLRHQPADLLEFALQHFTRLQQENERKGTARFCHEGRTWGD LGAAAGGGTP
 SKGVNFAE EPMQSDSEDEEEEEAAPADAGAFNAPVINRFTRRASVCAEAYNPDEEEDDAESRIIHPKTDD
 QRNRLQEACKDILLFKNLDPEQMSQVLDAMFEKLVKDGEHVIDQGDDGDNFYVIDRGTFDIYVKCDGVGR
 CVGNYDNRGSGFELALMYNTPRAATITATSPGALWGLDRVTFRRIVKNNAKKRKMYESFIESLPFLKSL
 EFSERLKVVDVIGTKVYNDGEQIIAQGDSADSFFIVESGEVKITMKRKGKSEVEENGAVEIARCSRQGYF
 GELALVTNKPRAASAHAGTVKCLAMDVQAFERLLGPCMEIMKRNIATYEEQLVALFGTNMDIVEPTA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6087_g02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002736

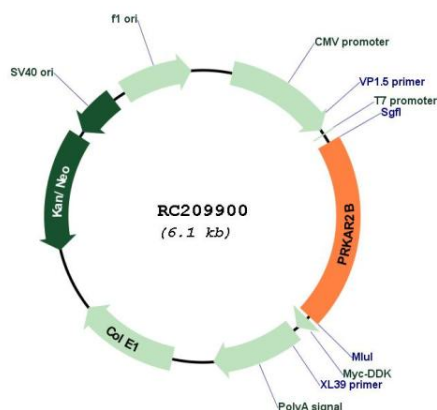
ORF Size: 1254 bp

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.

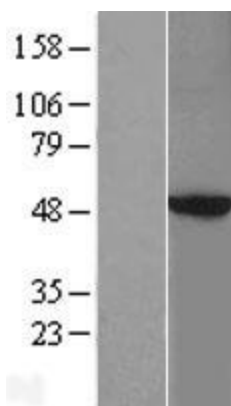
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_002736.3
RefSeq Size:	3678 bp
RefSeq ORF:	1257 bp
Locus ID:	5577
UniProt ID:	P31323
Cytogenetics:	7q22.3
Domains:	cNMP, RIIa
Protein Families:	Druggable Genome
Protein Pathways:	Apoptosis, Insulin signaling pathway
MW:	46.3 kDa
Gene Summary:	<p>cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP-dependent protein kinase, which transduces the signal through phosphorylation of different target proteins. The inactive kinase holoenzyme is a tetramer composed of two regulatory and two catalytic subunits. 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. The protein encoded by this gene is one of the regulatory subunits. This subunit can be phosphorylated by the activated catalytic subunit. This subunit has been shown to interact with and suppress the transcriptional activity of the cAMP responsive element binding protein 1 (CREB1) in activated T cells. Knockout studies in mice suggest that this subunit may play an important role in regulating energy balance and adiposity. The studies also suggest that this subunit may mediate the gene induction and cataleptic behavior induced by haloperidol. [provided by RefSeq, Jul 2008]</p>

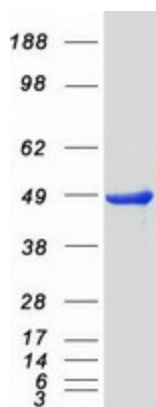
Product images:



Circular map for RC209900



Western blot validation of overexpression lysate (Cat# [LY419138]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209900 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PRKAR2B protein (Cat# [TP309900]). The protein was produced from HEK293T cells transfected with PRKAR2B cDNA clone (Cat# RC209900) using MegaTran 2.0 (Cat# [TT210002]).