

Product datasheet for **RG209900**

PRKAR2B (NM_002736) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PRKAR2B (NM_002736) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	PRKAR2B
Synonyms:	PRKAR2; RII-BETA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209900 representing NM_002736 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGCATCGAGATCCCGGCGGGACTGACGGAGCTGCTGCAGGGCTTCACGGTGGAGGTGCTGAGGCACC
AGCCCGCGGACCTGCTGGAGTTCGCTCTGCAGCACTTCACCCGCCTGCAGCAGGAGAACGAGCGCAAAGG
CACCGCGCGTCTCTGCCATGAGGGCAGGACCTGGGGGACCTGGGCGCCGCTGCCGGGGCGGCACCCCC
AGCAAGGGGTCAACTTCGCCGAGGAGCCCATGCAGTCCGACTCCGAGGACGGGAGGAGGAGGAGCGCG
CGCCCGCGGACGCAGGGCGTTCATGCTCCAGTAATAAACCGATTACAAAGCGTGCCTCAGTATGTGC
AGAAGCTTATAATCCTGATGAAGAAGAAGATGATGCAGAGTCCAGGATTATACATCCAAAACTGATGAT
CAAAGAAATAGGTTGCAAGAGGCTTCAAAAGACATCCTGCTGTTAAGAATCTGGATCCGGAGCAGATGT
CTCAAGTATTAGATGCCATGTTTAAAAATTTGGTCAAAGATGGGAGCATGTAATTGATCAAGGTGACGA
TGGTGACAACCTTTATGTAATTGATAGAGGCACATTTGATATTTATGTGAAATGTGATGGTGTGGGAAGA
TGTGTTGGTAACATGATAATCGTGGGAGTTTCGGCGAACTGGCCTTAATGTACAATACCCAGAGCAG
CTACAATCACTGCTACCTCTCCTGGTGTCTGTGGGTTTGGACAGGGTAACCTTCAGGAGAATAATTGT
GAAAAACAATGCCAAAAAGAGAAAAATGTATGAAAGCTTTATTGAGTCACTGCCATTCCTAAATCTTTG
GAGTTTTCTGAACGCCTGAAAGTAGTAGATGTGATAGGCACCAAAGTATACAACGATGGAGAACAATCA
TTGCTCAGGGAGATTCGGCTGATTCTTTTTTCATTGTAGAATCTGGAGAAGTGAAAATTACTATGAAAAAG
AAAGGGTAAATCAGAAGTGAAGAGAATGGTGCAGTAGAAATCGCTCGATGCTCGCGGGGACAGTACTTT
GGAGAGCTTGCCCTGGTAACTAACAAACCTCGAGCAGCTTCTGCCACGCCATTGGGACTGTCAAATGTT
TAGCAATGGATGTGCAAGCATTTGAAAGGCTTCTGGGACCTTGCATGGAATATGAAAAGGAACATCGC
TACCTATGAAGAACAGTTAGTTGCCCTGTTTGAACGAACATGGATATTGTTGAACCCACTGCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG209900 representing NM_002736
 Red=Cloning site Green=Tags(s)

MSIEIPAGL TELLQGFTVEVLRHQPADLLEFALQHFTRLQQENERKGTARFCHEGRTWGD LGAAAGGGTP
 SKGVNFAEPMQSDSEDEGEEEEAAPADAGAFNAPVINRF TRRASVCAEAYNPDEEEDDAESRIIHPKTDD
 QRNRLQEACKDILLFKNLDPEQMSQVLDAMFEKLVKDGEHVIDQDDGDNFYVIDRGTFDIYVKCDGVGR
 CVGNYDNRGSFGELALMYNTPRAATITATSPGALWGLDRVTFRRIVKNNAKKRKMYESFIESLPFLKSL
 EFSERLKVVDVIGTKVYNDGEQIIAQGDSADSFFIVESGEVKITMKRKGKSEVEENGAVEIARCSRQQYF
 GELALVTNKPRAASAHAI GTVKCLAMDVQAFERLLGPCMEIMKRNIATYEEQLVALFGTNMDIVEPTA

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002736

ORF Size: 1254 bp

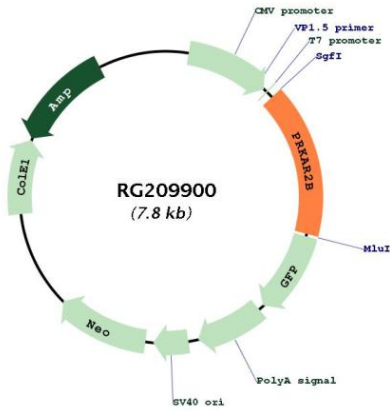
OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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.
RefSeq:	<u>NM_002736.2, NP_002727.2</u>
RefSeq Size:	3678 bp
RefSeq ORF:	1257 bp
Locus ID:	5577
UniProt ID:	<u>P31323</u>
Cytogenetics:	7q22.3
Domains:	cNMP, RIIa
Protein Families:	Druggable Genome
Protein Pathways:	Apoptosis, Insulin signaling pathway
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 RG209900