

Product datasheet for **RC207809**

PRKAR1B (NM_002735) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PRKAR1B (NM_002735) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PRKAR1B
Synonyms:	PRKAR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC207809 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCTCCCCGCCGCTGCCCTCGGAGGAGGACGAGAGCCTGAAGGGCTGTGAGCTGTACGTGCAGC
TGCACGGGATCCAGCAGGTCTCAAAGACTGTATCGTCCACCTCTGCATCTCCAAGCCCCAACGCCCCAT
GAAGTTCTCCGGGAGCACTTCGAGAAGCTGGAGAAGGAAGAAAACAGGCAGATTTTGGCGCGGCAAAAG
TCAAACACAGTCGGACTCCCATGATGAGGAGGTGTCGCCACCCCCCGAACCCCTGTGGTGAAGGCC
GCCGCCGGCAGGAGGCGTGAGTGCCGAGGTGTACACCGAGGAGGACGCCGTGCTCCTACGTCAGGAAGGT
GATTCCTCAAGGACTACAAAACCATGACTGCGCTGGCCAAGGCCATCTCCAAGAAGCTGCTCTTCGCTCAC
CTGGATGACAACGAGAGGAGTGACATATTCGATGCCATGTTCCCTGTCACTCACATCGCTGGGGAGACTG
TTATACAGCAAGGGAATGAAGGAGACAACCTTCTATGTCGTTGATCAAGGGGAAGTGGATGTGTACGTGAA
CGGAGAGTGGGTGACCAACATCAGCGAGGGAGGCAGCTTCGGGGAGCTGGCGCTCATCTACGGCACCCCC
AGGGCTGCGACCGTGAAAGCCAAGACGGACCTCAAGCTCTGGGGATCGACCGGGACAGTACCGGCCGA
TCCTTATGGGCAGCACGCTGAGGAAACGCAAGATGTACGAGGAGTTCTCAGCAAGGTCTCCATCTAGA
GTCCCTGGAGAAGTGGGAGCGTCTGACCGTGGCGGATGCGCTGGAGCCCGTCCAGTTTGAAGATGGAGAG
AAAATTGTGGTCCAGGGAGAGCCTGGGGACGACTTTTACATCATCACGGAGGGCACCGCGTCCGCTGCTGC
AGCGCCGTCCTCCCAATGAGGAGTACGTGGAGGTGGGGCGCTGGGACCCCTCTGACTACTTCGGGGAGAT
TGCACTGCTGCTGAACCGCCCCGGCGGCCACTGTCGTGGCCCGGGGGCCCTCAAGTGTGTGAAGCTG
GACCGGCCCGCTTCGAGCGTGTGCTGGGGCCCTGCTCTGAGATCCTCAAGAGGAACATTACGCTTACA
ACAGCTTCATCTCCCTCACCGTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC207809 protein sequence
 Red=Cloning site Green=Tags(s)

MASPPACPSEEDSLKGCELYVQLHGIQQVLKDCIVHLCISKPERPMKFLREHFKELEKEENRQILARQK
 SNSQSDSHDEEVSPTPPNPVVKARRRRGGVSAEVYTEADAVSYVRKVIPKDYKTMTALAKAISKNVLAH
 LDDNERSDIFDAMFPVTHIAGETVIQQNEGDNFYVVDQGEVDVYVNGEWTNISEGGSFGELAL IYGTP
 RAATVKAKTDLKLWIDRDSYRRILMGSTLRKRKMYEEFLSKVSILESLEKWERLTVADALEPVQFEDGE
 KIVVQGEPGDDFYIITEGTASVLRQRRSPNEEYVEVGRLGPSDYFGEIALLLNRPRAATVVARGLPKCVKL
 DRPRFERVLGPCSEILKRNIQRYNSFISLTV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6006_a05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002735

ORF Size: 1143 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:

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_002735.2](#)

RefSeq Size: 2512 bp

RefSeq ORF: 1146 bp

Locus ID: 5575

UniProt ID: [P31321](#)

Cytogenetics: 7p22.3

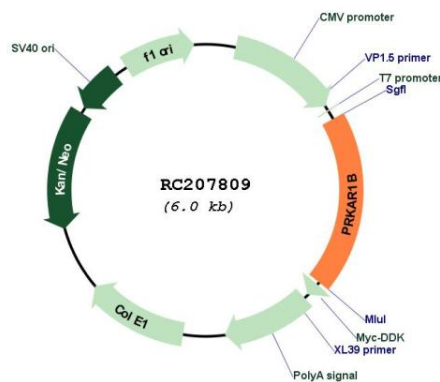
Protein Families: Druggable Genome

Protein Pathways: Apoptosis, Insulin signaling pathway

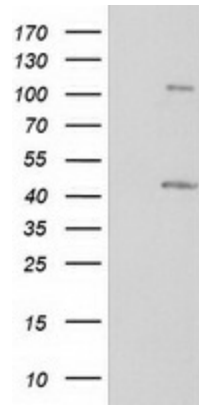
MW: 43.1 kDa

Gene Summary: The protein encoded by this gene is a regulatory subunit of cyclic AMP-dependent protein kinase A (PKA), which is involved in the signaling pathway of the second messenger cAMP. Two regulatory and two catalytic subunits form the PKA holoenzyme, disbands after cAMP binding. The holoenzyme is involved in many cellular events, including ion transport, metabolism, and transcription. Several transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Aug 2015]

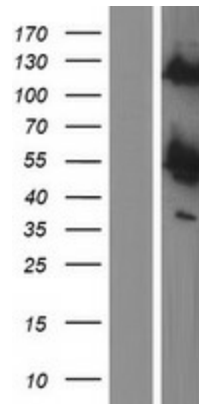
Product images:



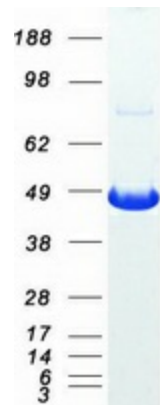
Circular map for RC207809



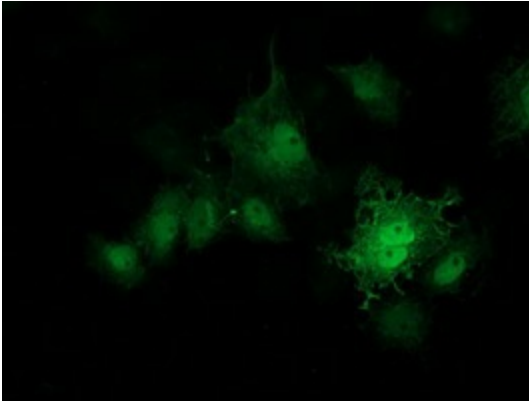
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PRKAR1B (Cat# RC207809, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PRKAR1B (Cat# [TA502750]). Positive lysates [LY400964] (100ug) and [LC400964] (20ug) can be purchased separately from OriGene.



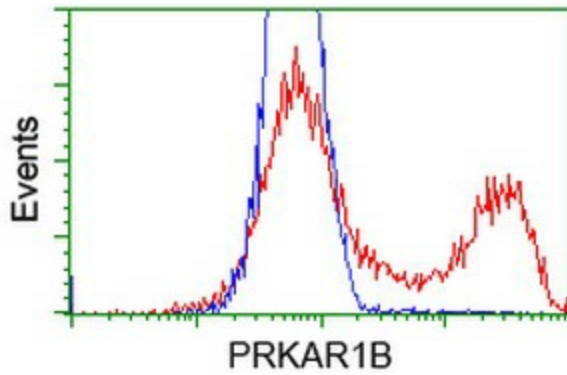
Western blot validation of overexpression lysate (Cat# [LY431891]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC228863] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PRKAR1B protein (Cat# [TP307809]). The protein was produced from HEK293T cells transfected with PRKAR1B cDNA clone (Cat# RC207809) using MegaTran 2.0 (Cat# [TT210002]).



Anti-PRKAR1B mouse monoclonal antibody ([TA502750]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY PRKAR1B (RC207809).



HEK293T cells transfected with either RC207809 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-PRKAR1B antibody ([TA502750]), and then analyzed by flow cytometry.