

## Product datasheet for MR218582

### Prkacb (NM\_001164198) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Prkacb (NM\_001164198) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Prkacb  
**Synonyms:** CbPKA; Pkacb  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR218582 representing NM\_001164198  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAATGTGAAAGAGTTTCTAGCCAAAGCCAAAGAAGACTTTCTGAGGAAATGGGAGAACCCTCCCCGA  
GTAATGCTGGGCTTGAGGATTTGAGAGGAAGAAAACCCTCGGGACGGGTTCTTTGGAAGAGTCATGTT  
GGTGAAGCATAAAGCCACTGAGCAGTACTACGCCATGAAGATCTTAGACAAGCAGAAGGTTGTTAAGCTG  
AAGCAAAATAGAGCACACTCTGAATGAGAAGAGAATCCTGCAGGCCGTGGAGTTCCCGTTCCTTGTCGGC  
TGGAGTACTCTTTAAGGATAATTCTAATTTATACATGGTTATGGAATACGTCCCTGGGGGAGAGATGTT  
CTCACATCTGAGAAGAATTGGAAGGTTCAAGTACGCCCCACGCCGTTTCTATGCAGCCCAGATTGTGCTA  
ACATTTGAGTACCTTCATTCCTCGACCTCATCTACAGAGATCTCAAGCCGAAAACCTCTTAATTGACC  
ACCAGGGTTACATCCAGGTCACAGATTTTCGGGTTTCGCAAAAGAGTCAAGGGCAGGACATGGACATTGTG  
TGGCACCCAGAGTACCTGGCCCCGAGATCATCCTCAGCAAGGGTTACAATAAGGCGGTGGACTGGTGG  
GCACTGGGCGTGTGATCTATGAGATGGCTGCTGGCTACCCTCCATTCTTTGCTGACCAGCCAATTCAGA  
TCTATGAGAAGATTGTCTCTGAAAGGTCGGTCCCATCACACTTCAGTCCGATCTCAAGGACCTTCT  
GCGGAACCTGCTGCAGGTGGATCTGACAAAGCGATTTCGGGAACCTGAAGAACGGCGTGAGTGACATAAAG  
ACCCACAAGTGGTTTGCACAACCTGACTGGATTGCTATTTATCAGAGAAAGGTTGAGGCTCCATTCATAC  
CAAAGTTCAGAGGCTCTGGCGATACCAGCAACTTCGATGACTATGAAGAAGAAGAAATCCGTGTGCTAT  
AACAGAAAAATGTGAAAGGAATTTTGTGAATTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR218582 representing NM\_001164198  
Red=Cloning site Green=Tags(s)

MNVKEFLAKAKEDFLRKWENPPPSNAGLEDFERKKT LGTGSFGRVMLVKHKATEQYYAMKILDKQKVVKL  
 KQIEHTLNEKRILQAVEFPFLVRLEYSFKDNSNLYMVMYVPGGEMF SHLRRIGRFSEPHARFYAAQIVL  
 TFEYLHSLDLIYRDLKPENLLIDHQGYIQVDFGF AKRVKGRWTLCGTPEYLAPEIILSKGYNKAVDWW  
 ALGVL IYEMAAGYPPFFADQPIQIYEKIVSGKVRFP SHFSSDLKDLLRNLLQVDLTKRFGNLKNGVSDIK  
 THKW FATTDWIAIYQRKVEAPFIPKFRGSGDTSNFDDYEEEEIRVSITEKCGKEFCF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001164198

**ORF Size:** 1014 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\\_001164198.1](#), [NP\\_001157670.1](#)

**RefSeq Size:** 4337 bp

**RefSeq ORF:** 1017 bp

**Locus ID:** 18749

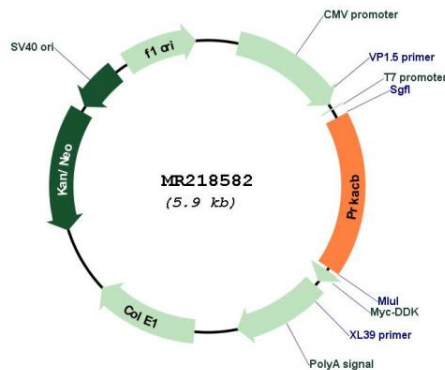
**UniProt ID:** [P68181](#)

**Cytogenetics:** 3 H2

**MW:** 39.9 kDa

**Gene Summary:** Mediates cAMP-dependent signaling triggered by receptor binding to GPCRs. PKA activation regulates diverse cellular processes such as cell proliferation, the cell cycle, differentiation and regulation of microtubule dynamics, chromatin condensation and decondensation, nuclear envelope disassembly and reassembly, as well as regulation of intracellular transport mechanisms and ion flux (PubMed:9368018). Regulates the abundance of compartmentalized pools of its regulatory subunits through phosphorylation of PJA2 which binds and ubiquitinates these subunits, leading to their subsequent proteolysis. Phosphorylates GPKOW which regulates its ability to bind RNA (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR218582