

Product datasheet for **SC125501**

PRKAR2B (NM_002736) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PRKAR2B (NM_002736) Human Untagged Clone
Tag:	Tag Free
Symbol:	PRKAR2B
Synonyms:	PRKAR2; RII-BETA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC125501 GCGATCGCCATGAGCATCGAGATCCCGCGGGACTGACGGAGCTGCTGCAGGGCTTACCGTGGAGGTGC TGAGGCACCAGCCCGCGACCTGCTGGAGTTCGCTCTGCAGCACTTACCCCGCTGCAGCAGGAGAACGA GCGCAAAGGCACCGCGCTTCTGCCATGAGGGCAGGACCTGGGGGACCTGGGCGCCGCTGCCGGGGC GGCACCCAGCAAGGGGTCAACTTCGCCGAGGAGCCCATGCAGTCCGACTCCGAGGACGGGAGGAGG AGGAGGCGGCGCCGCGGACGCAGGGGCGTTCAATGCTCCAGTAATAAACCGATTACAAGGCGTGCCTC AGTATGTGCAGAAGCTTATAATCCTGATGAAGAAGAAGATGATGCAGAGTCCAGGATTATACATCCAAAA ACTGATGATCAAAGAAATAGGTTGCAAGAGGCTTGCAAAGACATCCTGCTGTTAAGAATCTGGATCCGG AGCAGATGTCTCAAGTATTAGATGCCATGTTTGAAAAATTGGTCAAAGATGGGGAGCATGTAATTGATCA AGGTGACGATGGTGACAACCTTTATGTAATTGATAGAGGCACATTTGATATTTATGTGAAATGTGATGGT GTTGGAAGATGTGTTGGTAACTATGATAATCGTGGGAGTTTCGGCGAACTGGCCTTAATGTACAATACAC CCAGAGCAGCTACAATCACTGCTACCTCTCCTGGTCTGTGGGTTTTGGACAGGGTAACCTTCAGGAG AATAATTGTGAAAAACAATGCCAAAAAGAGAAAAATGTATGAAAGCTTTATTGAGTCACTGCCATTCCTT AAATCTTTGGAGTTTTCTGAACGCCTGAAAGTAGTAGATGTGATAGGCACCAAAGTATACAACGATGGAG AACAAATCATTGCTCAGGGAGATTCCGGCTGATTCTTTTTTCATTGTAGAATCTGGAGAAGTGAAATTAC TATGAAAAGAAAGGTAATCAGAAGTGGAAAGAGAATGGTGCAGTAGAAATCGCTCGATGCTCGCGGGGA CAGTACTTTGGAGAGCTTGCCCTGGTAACTAACAAACCTCGAGCAGCTTCTGCCACGCCATTGGGACTG TCAAATGTTTAGCAATGGATGTGCAAGCATTTGAAAGGCTTCTGGGACCTTGCATGGAAATTATGAAAAG GAACATCGCTACCTATGAAGAACAGTTAGTTGCCCTGTTTGAACGAACATGGATATTGTTGAACCCACT GCATGAACGCGT
Chromatograms:	https://cdn.origene.com/chromatograms/ja2262_d04.zip
Restriction Sites:	NotI-NotI
ACCN:	NM_002736
Insert Size:	3520 bp



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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](#)

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_002736.2](#), [NP_002727.2](#)

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

Gene Summary:

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]