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Product datasheet for SC118451

Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM_002734) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM_002734) Human Untagged Clone
Tag:	Tag Free
Symbol:	Protein Kinase A regulatory subunit I alpha
Synonyms:	ACRDYS1; ADOHR; CAR; CNC; CNC1; PKR1; PPNAD1; PRKAR1; TSE1
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene sequence for NM_002734 edited
GAATTCGGCACGAGGGCCGTTTCCGGTGGAGCTGTCGCCTAGCCGCTATCGCAGAGTGGA
GCGGGGCTGGGAGCAAAGCGCTGAGGGAGCTCGGTACGCCGCCGCCTCGCACCCGCAGCC
TCGCGCCCGCCGCCGCCCGTCCCCAGAGAACCATGGAGTCTGGCAGTACCGCCGCCAGTG
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TGCTCAAAGATTCTATTGTGCAGTTGTGCACTGCTCGACCTGAGAGACCCATGGCATTCC
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TGGGCAGTGAGTGCCATGCTTTTTGGTGAGGGCAGATCCCAGCACCTATTGAATTACCAT
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002734 unedited
TCAAATTTTGTATACGACTCACTATAGGGCGGCCGCGATTCGGCACGAGGGCCGTTTCCG
GTGGAGCTGTCGCCTAGCCGCTATCGCAGAGTGGAGCGGGGCTGGGAGCAAAGCGCTGAG
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AGCNTTGGAGAAACTGCTTGATTTATGGACACCGANAGCAGCCACTGGTCAAAGCAAGAC
AAATGTGAAATGTGGGGCATCGACCGAGACAGCTATAGAGAATCCTCATGGGAAGCCACT
GAGAAAGCGGAGATGTTGAGGAATTCTTAGTAAGT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_002734 unedited
ACTATGGACGCGGCCGCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTAAAAATTTAA
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ATATTAGCACACATGGTATAATCAGACTGGTAATCAGGAAGCAATACAAAACGGTCCTTT
GGCCATCTATACTTTCTAGAGCAGTAAATCTCATAAATTCACTTACCAAGCCCAGGAATA
ATGACTTTTAAAGCCTTGAATATCAACTAAGACAAATTATGCCAATTCTGATTTCTCACA
TATACTTAGATTACACAAAGATAAAGCTTTAGATGTGATCATTGTTTAATGTAGACTTAT
CTTTAAAGTTTTTAATTAAAAACTACAGAAGGGAGTAAACAGCAAGCCAAATGATTTAAC
CAAATGATTTAAGAGTAAAACTCACTCAGAAAGCATTATACGTAACTAAATATACATGAG
CATGATTATATACATACATGAAACTGCAATTTTATGGCATTCTAAGTAACTCATTTAAGT
ACATTTTGGCATTTAAACAAAGATCAAATCAAGCTTTAAGCTTGTAAGAACGTAATTTTC
ATTTTTAATTTTTTAAATATAAAAAGGTAGCTAAACACAAAGTACAGATCAGAAACCCTC
ATTTAATATAGATTATTTTGGAAATTAAAAAATTTGTAACAAGGTGGCTTTCTTACCCAC
CCTANAATGTAAATAAAACCTCTTCCCCAGATTTATACTTCATACTTGGTAACAACCTAN
NAGTTTTTCAAATCTATGAAAAAATCTACCCATGACCAATTAAATTACCTGNGAAAGGCA
GGAGAAGGGATCAATACAGAGTCAGTTAGTTGACACAGATGGAAAATGCTTGCAGTCACT
CCAATATAACCTACTTACCTATATATAATACATGNAATAAAATGCCTACATACAGACTGT
GAAATN

Restriction Sites: NotI-NotI

ACCN: NM_002734

Insert Size: 4000 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_002734.3, NP_002725.1
RefSeq Size:	3626 bp
RefSeq ORF:	1146 bp
Locus ID:	5573
UniProt ID:	P10644
Cytogenetics:	17q24.2
Domains:	cNMP, RIIa
Protein Families:	Druggable Genome, Transcription Factors
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. This gene encodes one of the regulatory subunits. This protein was found to be a tissue-specific extinguisher that down-regulates the expression of seven liver genes in hepatoma x fibroblast hybrids. Mutations in this gene cause Carney complex (CNC). This gene can fuse to the RET protooncogene by gene rearrangement and form the thyroid tumor-specific chimeric oncogene known as PTC2. A nonconventional nuclear localization sequence (NLS) has been found for this protein which suggests a role in DNA replication via the protein serving as a nuclear transport protein for the second subunit of the Replication Factor C (RFC40). Several alternatively spliced transcript variants encoding two different isoforms have been observed. [provided by RefSeq, Jan 2013] Transcript Variant: This variant (1) contains an alternate exon in place of the first 5' UTR exon compared to variant 2. Variants 1, 2, 3, 4, and 6 all encode the same isoform (a).