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Product datasheet for SC335446

Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM_001276290) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM_001276290) 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:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC335446 representing NM_001276290. Blue=Insert sequence Red=Cloning site Green=Tag(s) GCTCGTTTAGTGAACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC ATGGAGTCTGGCAGTACCGCCGCCAGTGAGGAGGCACGCAGCCTTCGAGAATGTGAGCTCTACGTCCAG AAGCATAACATTCAAGCGCTGCTCAAAGATTCTATTGTGCAGTTGTGCACTGCTCGACCTGAGAGACCC ATGGCATTCCTCAGGGAATACTTTGAGAGGTTGGAGAAGGAGGAGGCAAAACAGATTCAGAATCTGCAG AAAGCAGGCACTCGTACAGACTCAAGGGAGGATGAGATTTCTCCTCCTCCACCCAACCCAGTGGTTAAA GGTAGGAGGCGACGAGGTGCTATCAGCGCTGAGGTCTACACGGAGGAAGATGCGGCATCCTATGTTAGA AAGGTTATACCAAAAGATTACAAGACAATGGCCGCTTTAGCCAAAGCCATTGAAAAGAATGTGCTGTTT TCACATCTTGATGATAATGAGAGAAGTGATATTTTTGATGCCATGTTTTCGGTCTCCTTTATCGCAGGA GAGACTGTGATTCAGCAAGGTGATGAAGGGGATAACTTCTATGTGATTGATCAAGGAGAGACGGATGTC TATGTTAACAATGAATGGGCAACCAGTGTTGGGGAAGGAGGGAGCTTTGGAGAACTTGCTTTGATTTAT GGAACACCGAGAGCAGCCACTGTCAAAGCAAAGACAAATGTGAAATTGTGGGGCATCGACCGAGACAGC TATAGAAGAATCCTCATGGGAAGCACACTGAGAAAGCGGAAGATGTATGAGGAATTCCTTAGTAAAGTC TCTATTTTAGAGTCTCTGGACAAGTGGGAACGTCTTACGGTAGCTGATGCATTGGAACCAGTGCAGTTT GAAGATGGGCAGAAGATTGTGGTGCAGGGAGAACCAGGGGATGAGTTCTTCATTATTTTAGAGGGGTCA GCTGCTGTGCTACAACGTCGGTCAGAAAATGAAGAGTTTGTTGAAGTGGGAAGATTGGGGCCTTCTGAT TATTTTGGTCACCTCATCATCTCAAGGAGGAGCATTCCCCTGGGCTAA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
Restriction Sites:	SgfI-MluI

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ACCN:	NM_001276290
Insert Size:	1014 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_001276290.1
RefSeq Size:	1218 bp
RefSeq ORF:	1014 bp
Locus ID:	5573
UniProt ID:	P10644
Cytogenetics:	17q24.2
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	Apoptosis, Insulin signaling pathway
MW:	38 kDa

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 (5) has an alternate exon in place of the last exon compared to variant 2. The resulting isoform (b) has a shorter and distinct C-terminus compared to isoform a. Note that the 5' UTR splicing pattern of this variant has not been determined.