

## Product datasheet for RC203828L3

### OriGene Technologies, Inc.

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# Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM\_002734) Human Tagged Lenti ORF Clone

**Product data:** 

**Product Type:** Expression Plasmids

Product Name: Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM\_002734) Human Tagged Lenti ORF

Clone

Tag: Myc-DDK

Symbol: Protein Kinase A regulatory subunit I alpha

Synonyms: ACRDYS1; ADOHR; CAR; CNC; CNC1; PKR1; PPNAD1; PRKAR1; TSE1

Mammalian Cell

Selection:

Puromycin

Vector: pLenti-C-Myc-DDK-P2A-Puro (PS100092)

E. coli Selection: Chloramphenicol (34 ug/mL)

**ORF Nucleotide** 

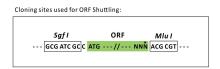
okr Nucleotide

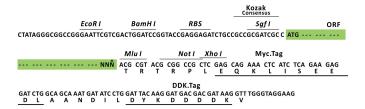
The ORF insert of this clone is exactly the same as(RC203828).

Sequence:

**Restriction Sites:** Sgfl-Mlul

**Cloning Scheme:** 





 $<sup>\</sup>ensuremath{^*}$  The last codon before the Stop codon of the ORF.

**ACCN:** NM 002734





# Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM\_002734) Human Tagged Lenti ORF Clone - RC203828L3

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: <u>NM 002734.3</u>

RefSeq Size: 4325 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

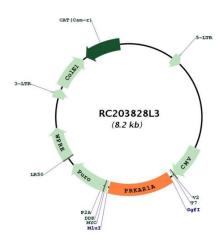
MW: 43 kDa



#### **Gene Summary:**

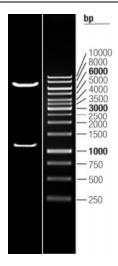
cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP-dependent protein kinase, which transduces the signal through phosphorylation of different target proteins. The inactive kinase holoenzyme is a tetramer composed of two regulatory 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]

### **Product images:**



Circular map for RC203828L3





Double digestion of RC203828L3 using Sgfl and Mlul  $\,$