



# Recombinant Human cAMP-dependent protein kinase type I-alpha regulatory subunit (PRKAR1A)

<b>Product Code</b>	CSB-YP018694HU
<b>Storage</b>	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
<b>Uniprot No.</b>	P10644
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Purity</b>	>85% (SDS-PAGE)
<b>Sequence</b>	MESGSTAASE EARSLRECEL YVQKHNIQAL LKDSIVQLCT ARPERPMAFL REYFERLEKE EAKQIQNLQK AGTRTDSRED EISPPPPNPV VKGRRRRGAI SAEVYTEEDA ASYVRKVIK DYKTMAALAK AIEKNVLFSD LDDNERSDIF DAMFSVSFIA GETVIQQGDE GDNFYVIDQG ETDVYVNEW ATSVGEGGSF GELALIYGTP RAATVKAKTN VKLWIGDRDS YRRILMGSTL RKRKMYEEFL SKVSILESLD KWERLTVADA LEPVQFEDGQ KIVVQGEFGD EFFIILEGSA AVLQRRSENE EFVEVGRGLP SDYFGEIALL MNRPRAATVV ARGPLKCVKL DRPRFERVLG PCSDILKRNI QQYNSFVSLV V
<b>Source</b>	Yeast
<b>Target Names</b>	PRKAR1A
<b>Protein Names</b>	Recommended name: cAMP-dependent protein kinase type I-alpha regulatory subunit Alternative name(s): Tissue-specific extinguisher 1 Short name= TSE1
<b>Expression Region</b>	1-381
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	Tag type will be determined during the manufacturing process.
<b>Protein Length</b>	Full length protein
<b>Target Details</b>	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). Three alternatively spliced transcript variants encoding the same protein have been observed.

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**Reconstitution**

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

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**Shelf Life**

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.