

## Product datasheet for PH312810

### Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM\_212472) Human Mass Spec Standard

#### Product data:

Product Type:	Mass Spec Standards
Description:	PRKAR1A MS Standard C13 and N15-labeled recombinant protein (NP_997637)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC212810
Predicted MW:	43 kDa
Protein Sequence:	>RC212810 protein sequence Red=Cloning site Green=Tags(s)  MESGSTAASEEARSLRECELYVQKHNIQALLKDSIVQLCTARPERPMAFLREYFERLEKEEAKQIQNLQK AGTRTDSREDEISPPPPNPVVKRRRRGAI SAEVYTEEDAASYVRKVIPKDYKTMAALAKAIEKNVLF SH LDDNERSDIFDAMFSVSFIAGETVIQQGDEGDNFYVIDQGETDVYVNNNEWATSVGEGGSFGELALIYGTP RAATVKAKTNVKLWGIDRDSYRRILMGSTLRKRKMYEEFLSKVSI LESLDKWERL TVADALEPVQFEDGQ KIVVQGEPEGDEFFIILEGSAAVLQRRSENEEFVEVGRLGPSDYFGEIALLMNRPRAA TVVARGPLKCVKL DRPRFERVLGPCSDILKRNIQQYNSFVLSLV  TRTRPLEQKLI SEEDLAANDILDYKDDDDKV
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>4</sub> ]-L-Arginine and [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>2</sub> ]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<a href="#">NP_997637</a>
RefSeq Size:	4356
RefSeq ORF:	1143
Synonyms:	ACRDYS1; ADOHR; CAR; CNC; CNC1; PKR1; PPNAD1; PRKAR1; TSE1



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Locus ID: 5573

UniProt ID: [P10644](#), [B2R5T5](#)

Cytogenetics: 17q24.2

**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]

**Protein Families:** Druggable Genome, Transcription Factors

**Protein Pathways:** Apoptosis, Insulin signaling pathway

### Product images:



Coomassie blue staining of purified PRKAR1A protein (Cat# [TP312810]). The protein was produced from HEK293T cells transfected with PRKAR1A cDNA clone (Cat# [RC212810]) using MegaTran 2.0 (Cat# [TT210002]).