Recombinant Human PRKAR1A Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. PRKAR1A-2253H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	PRKAR1A MS Standard C13 and N15-labeled recombinant protein (NP_997637) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	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

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	observed.
Molecular Mass	43 kDa
AA Sequence	MESGSTAASEEARSLRECELYVQKHNIQALLKDSIVQLCTARPERPMAFLREYFERL EKEEAKQIQNLQKAGTRTDSREDEISPPPPNPVVKGRRRRGAISAEVYTEEDAASYV RKVIPKDYKTMAALAKAIEKNVLFSHLDDNERSDIFDAMFSVSFIAGETVIQQGDEGD NFYVIDQGETDVYVNNEWATSVGEGGSFGELALIYGTPRAATVKAKTNVKLWGIDR DSYRRILMGSTLRKRKMYEEFLSKVSILESLDKWERLTVADALEPVQFEDGQKIVVQ GEPGDEFFIILEGSAAVLQRRSENEEFVEVGRLGPSDYFGEIALLMNRPRAATVVAR GPLKCVKLDRPRFERVLGPCSDILKRNIQQYNSFVSLSVTRTRPLEQKLISEEDLAAN DILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 μg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name	PRKAR1A protein kinase cAMP-dependent type I regulatory subunit alpha [Homo sapiens (human)]
Official Symbol	PRKAR1A

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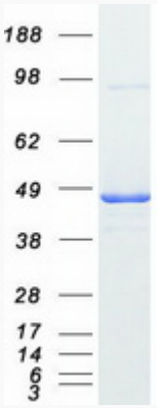
Synonyms	PRKAR1A; protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extinguisher 1); PRKAR1, TSE1; cAMP-dependent protein kinase type I-alpha regulatory subunit; tissue-specific extinguisher 1; protein kinase A type 1a regulatory subunit; cAMP-dependent protein kinase regulatory subunit RIalpha; cAMP-dependent protein kinase type I-alpha regulatory chain; CAR; CNC; CNC1; PKR1; TSE1; ADOHR; PPNAD1; PRKAR1; MGC17251; DKFZp779L0468;
Gene ID	5573
mRNA Refseq	NM_212472
Protein Refseq	NP_997637
MIM	188830
UniProt ID	P10644
SDS-PAGE	

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