Recombinant Human PRKAR1A, His-tagged

Cat. No. PRKAR1A-4870H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human PRKAR1A Protein was expressed in Sf9 insect cells using a C-terminal His tag.
Species	Human
Source	Sf9 Cells
ProteinLength	Full Length
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

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	alternatively spliced transcript variants encoding two different isoforms have been observed.
Form	Recombinant protein stored in 50mM sodium phosphate, pH 7.0, 300mM NaCl, 150mM imidazole, 0.1mM PMSF, 0.25mM DTT, 25% glycerol.
Molecular Mass	~51 kDa
Purity	>85%
Applications	Western Blot
Stability	1 yr at -70oC from date of shipment.
Storage	Store product at –70oC. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Concentration	0.2 ug/ul

GENE INFORMATION

Gene Name	PRKAR1A?protein kinase, cAMP-dependent, regulatory, type I, alpha [Homo sapiens?(human)]
Official Symbol	PRKAR1A
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; Carney complex type 1; tissue-specific extinguisher 1; protein kinase A type 1a regulatory subunit; cAMP-dependent protein kinase regulatory

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	subunit RIalpha; cAMP-dependent protein kinase type I-alpha regulatory chain; NP_001263218.1; EC 2.7.11.1; NP_001263219.1; NP_001265362.1; NP_002725.1; NP_997636.1; NP_997637.1
Gene ID	5573
mRNA Refseq	NM_002734
Protein Refseq	NP_002725
MIM	188830
UniProt ID	P10644
Chromosome Location	17q23-q24
Pathway	Aquaporin-mediated transport; Calcium Regulation in the Cardiac Cell; DAG and IP3 signaling
Function	cAMP binding; cAMP-dependent protein kinase inhibitor activity; cAMP-dependent protein kinase regulator activity

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