

## Product datasheet for **TP312810**

### Protein Kinase A regulatory subunit I alpha (PRKAR1A) (NM\_212472) Human Recombinant Protein

#### Product data:

**Product Type:** Recombinant Proteins

**Description:** Recombinant protein of human protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extinguisher 1) (PRKAR1A), transcript variant 3, 20 µg

**Species:** Human

**Expression Host:** HEK293T

**Expression cDNA Clone or AA Sequence:** >RC212810 protein sequence  
**Red**=Cloning site **Green**=Tags(s)

MESGSTAASEEARSLRECELYVQKHNIQALLKDSIVQLCTARPERPMAFLREYFERLEKEEAKQIQNLQK  
AGTRTDSREDEISPPPPNPVVKGRRRRGAISSAEVYTEEDAASYVRKVIPKDYKTMALAKAIEKNVLFSD  
LDDNERSDIFDAMFSVSFIAGETVIQQGDEGDNFYVIDQGETDVYVNNNEWATSVGEGGSGFELALIYGTP  
RAATVKAKTNVKLWIDRDSYRRILMGSTLRKRKMYEFLSKVSIKESLDKWERLTVADALEPVQFEDGQ  
KIVVQGPGEFFIILEGSAAVLQRRSENEEFVEVGRGLGPSDYFGEIALLMNRPRRAATVWARGPLKCVKL  
DRPRFERVLGPCSDILKRNIQQYNSFVLSLV

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Tag:** C-Myc/DDK

**Predicted MW:** 42.8 kDa

**Concentration:** >0.05 µg/µL as determined by microplate BCA method

**Purity:** > 80% as determined by SDS-PAGE and Coomassie blue staining

**Buffer:** 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol

**Preparation:** Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.

**Note:** For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

**Storage:** Store at -80°C.

**Stability:** Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.



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RefSeq: [NP\\_997637](#)

Locus ID: 5573

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

RefSeq Size: 4356

Cytogenetics: 17q24.2

RefSeq ORF: 1143

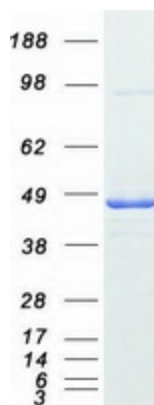
Synonyms: ACRDYS1; ADOHR; CAR; CNC; CNC1; PKR1; PPNAD1; PRKAR1; TSE1

**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]).