10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Protein Kinase A regulatory subunit I alpha Antibody (N-term)

**Purified Rabbit Polyclonal Antibody (Pab)**
**Catalog # AP8095a**

## Specification

### Protein Kinase A regulatory subunit I alpha Antibody (N-term) - Product Information

| | |
|---|---|
| Application | **WB, IHC-P,E** |
| Primary Accession | P10644 |
| Reactivity | **Human** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **Rabbit IgG** |
| Calculated MW | **42982** |
| Antigen Region | **1-30** |

### Protein Kinase A regulatory subunit I alpha Antibody (N-term) - Additional Information

**Gene ID** 5573

**Other Names**
cAMP-dependent protein kinase type I-alpha regulatory subunit, Tissue-specific extinguisher 1, TSE1, cAMP-dependent protein kinase type I-alpha regulatory subunit, N-terminally processed, PRKAR1A, PKR1, PRKAR1, TSE1

**Target/Specificity**
This Protein Kinase A regulatory subunit I alpha antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human Protein Kinase A regulatory subunit I alpha.

**Dilution**
WB~~1:1000
IHC-P~~1:50~100

**Format**
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**
Protein Kinase A regulatory subunit I alpha Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

### Protein Kinase A regulatory subunit I alpha Antibody (N-term) - Protein Information

**Name** PRKAR1A

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**Synonyms** PKR1, PRKAR1, TSE1

**Function** Regulatory subunit of the cAMP-dependent protein kinases involved in cAMP signaling in cells.

**Cellular Location**
Cell membrane.

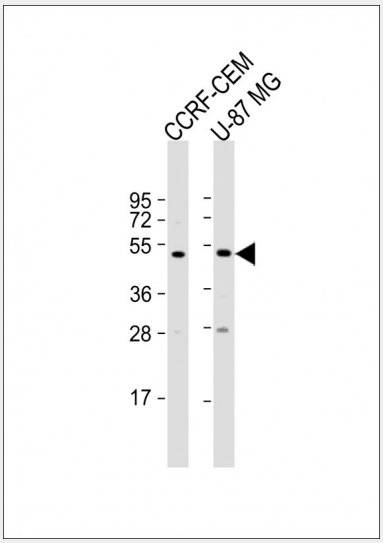
**Tissue Location**
Four types of regulatory chains are found: I-alpha, I-beta, II-alpha, and II-beta. Their expression varies among tissues and is in some cases constitutive and in others inducible

## Protein Kinase A regulatory subunit I alpha Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

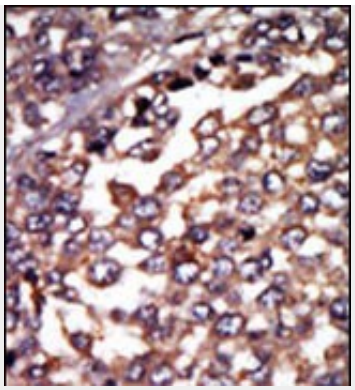
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## Protein Kinase A regulatory subunit I alpha Antibody (N-term) - Images




All lanes : Anti-PKR1 Antibody (M1) at 1:1000 dilution Lane 1: CCRF-CEM whole cell lysate Lane 2: U-87 MG whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 43 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

**Protein Kinase A regulatory subunit I alpha Antibody (N-term) - Background**

cAMP is a signaling molecule important for a variety of cellular functions. cAMP exerts its effects by activating the cAMP-dependent protein kinase (AMPK), which transduces the signal through phosphorylation of different target proteins. The inactive holoenzyme of AMPK 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 of AMPK have been identified in humans. PKR1 is 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. Functional null mutations in the gene cause Carney complex (CNC), an autosomal dominant multiple neoplasia syndrome. The gene can fuse to the RET protooncogene by gene rearrangement and form the thyroid tumor-specific chimeric oncogene known as PTC2.

**Protein Kinase A regulatory subunit I alpha Antibody (N-term) - References**

Gronholm, M., et al., J. Biol. Chem. 278(42):41167-41172 (2003).
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Robinson-White, A., et al., Hum. Mol. Genet. 12(13):1475-1484 (2003).
Holm, A.M., et al., J. Immunol. 170(11):5772-5777 (2003).