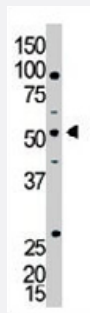


PRKAR1A polyclonal antibody

Catalog # PAB3313

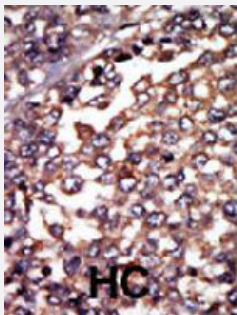
Size 400 uL

Applications



Western Blot (Cell lysate)

Western blot analysis of PRKAR1A polyclonal antibody (Cat # PAB3313) in Jurkat cell lysate. PRKAR1A (arrow) was detected using purified polyclonal antibody. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Formalin-fixed and paraffin-embedded human hepatocellular carcinoma tissue reacted with PRKAR1A polyclonal antibody (Cat # PAB3313), 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. HC = hepatocarcinoma.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of PRKAR1A.
Immunogen	A synthetic peptide (conjugated with KLH) corresponding to N-terminus of human PRKAR1A.
Host	Rabbit
Reactivity	Human
Form	Liquid
Purification	Protein G purification

Recommend Usage	Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) (1:50-100) Western Blot (1:1000) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS (0.09% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Applications

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Gene Info — PRKAR1A

Entrez GeneID	5573
Protein Accession#	P10644
Gene Name	PRKAR1A
Gene Alias	CAR, CNC, CNC1, DKFZp779L0468, MGC17251, PKR1, PPNAD1, PRKAR1, TSE1
Gene Description	protein kinase, cAMP-dependent, regulatory, type I, alpha (tissue specific extinguisher 1)
Omim ID	160980 188550 188830 255960 610489
Gene Ontology	Hyperlink

Gene 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 PTC 2. 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). Three alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq]

Other Designations

cAMP-dependent protein kinase regulatory subunit R1alpha|cAMP-dependent protein kinase type I-alpha regulatory chain|cAMP-dependent protein kinase, regulatory subunit alpha 1|protein kinase A type 1a regulatory subunit|tissue-specific extinguisher 1

Publication Reference

- [Molecular and functional analysis of PRKAR1A and its locus \(17q22-24\) in sporadic adrenocortical tumors: 17q losses, somatic mutations, and protein kinase A expression and activity.](#)

Bertherat J, Groussin L, Sandrini F, Matyakhina L, Bei T, Stergiopoulos S, Papageorgiou T, Bourdeau I, Kirschner LS, Vincent-Dejean C, Perlempine K, Gicquel C, Bertagna X, Stratakis CA.

Cancer Research 2003 Sep; 63(17):5308.

- [Merlin links to the cAMP neuronal signaling pathway by anchoring the R1beta subunit of protein kinase A.](#)

Gronholm M, Vossebein L, Carlson CR, Kuja-Panula J, Teesalu T, Alfthan K, Vaheri A, Rauvala H, Herberg FW, Tasken K, Carpen O.

The Journal of Biological Chemistry 2003 Oct; 278(42):41167.

- [Human tumors associated with Carney complex and germline PRKAR1A mutations: a protein kinase A disease!](#)

Stergiopoulos SG, Stratakis CA.

FEBS Letters 2003 Jul; 546(1):59.

Pathway

- [Apoptosis](#)
- [Insulin signaling pathway](#)

Disease

- [Adenoma](#)
- [Adrenal Cortex Diseases](#)
- [Adrenal Cortex Neoplasms](#)
- [Cushing Syndrome](#)
- [Genetic Predisposition to Disease](#)
- [Myxoma](#)
- [Thyroid Neoplasms](#)