

## PRKCA Antibody

Catalog No: #32053

Orders: [order@signalwayantibody.com](mailto:order@signalwayantibody.com)Support: [tech@signalwayantibody.com](mailto:tech@signalwayantibody.com)

## Description

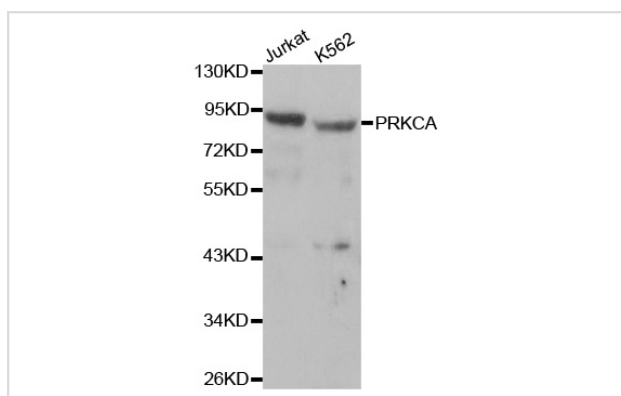
Product Name	PRKCA Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were purified by affinity purification using immunogen.
Applications	WB IHC
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous level of total PRKCA protein.
Immunogen Type	Peptide
Immunogen Description	A synthetic peptide of human PRKCA.
Target Name	PRKCA
Other Names	PKCA; AAG6; PKCA; PRKACA; PKG-alpha
Accession No.	Swiss-Prot:P17252NCBI Gene ID:5578
SDS-PAGE MW	77KD
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg <sup>2+</sup> and Ca <sup>2+</sup> ), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C

## Application Details

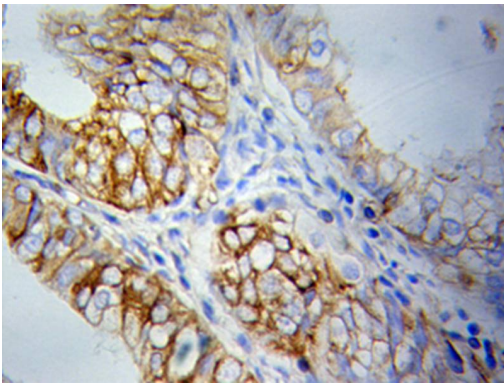
Western blotting: 1:500 - 1:2000

Immunohistochemistry: 1:50 - 1:200

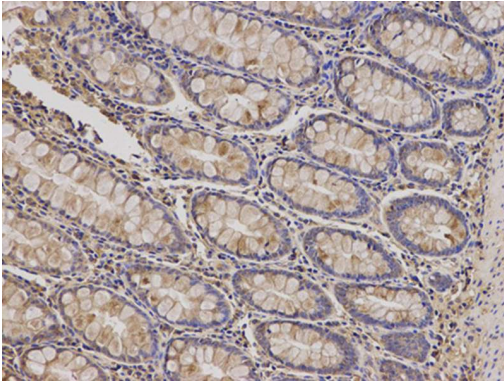
## Images



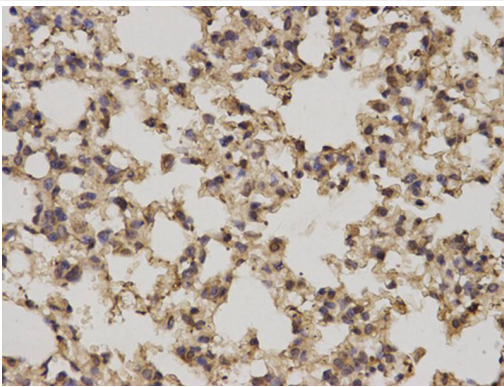
Western blot analysis of extracts of Jurkat and K562 cells, using PRKCA antibody.



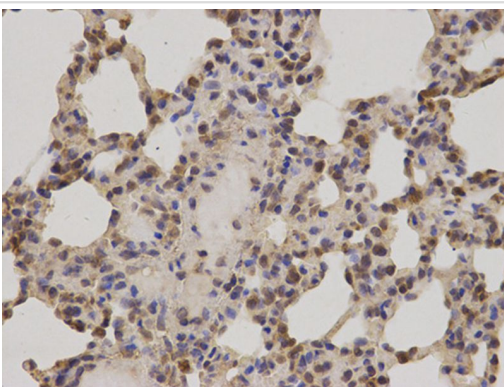
Immunohistochemical analysis of paraffin-embedded Pancreas cancer using PRKCA antibody.



Immunohistochemical analysis of paraffin-embedded human rectum using PRKCA antibody at dilution of 1:100 (200x lens).



Immunohistochemical analysis of paraffin-embedded mouse lung using PRKCA antibody at dilution of 1:100 (400x lens).



Immunohistochemical analysis of paraffin-embedded rat lung using PRKCA antibody at dilution of 1:100 (400x lens).

## Background

Activation of protein kinase C (PKC) is one of the earliest events in a cascade that controls a variety of cellular responses, including secretion, gene expression, proliferation, and muscle contraction (1,2). PKC isoforms belong to three groups based on calcium dependency and activators. Classical PKCs are calcium-dependent via their C2 domains and are activated by phosphatidylserine (PS), diacylglycerol (DAG), and phorbol esters (TPA, PMA) through their cysteine-rich C1 domains. Both novel and atypical PKCs are calcium-independent, but only novel PKCs are activated by PS, DAG, and phorbol esters (3-5). Members of these three PKC groups contain a pseudo-substrate or autoinhibitory domain that binds to substrate-binding sites in the catalytic domain to prevent activation in the absence of cofactors or activators. Control of PKC activity is regulated through three distinct phosphorylation events. Phosphorylation at Thr500 in the activation loop, the autophosphorylation site at Thr641, and at carboxy-terminal hydrophobic

site Ser660 occurs in vivo (2). Atypical PKC isoforms lack hydrophobic region phosphorylation, which correlates with the presence of glutamic acid rather than the serine or threonine residues found in more typical PKC isoforms. Either the enzyme PDK1 or a close relative is responsible for PKC activation. A recent addition to the PKC superfamily is PKC $\mu$  (PKD), which is regulated by DAG and TPA through its C1 domain. PKD is distinguished by the presence of a PH domain and by its unique substrate recognition and Golgi localization (6). PKC-related kinases (PRK) lack the C1 domain and do not respond to DAG or phorbol esters. Phosphatidylinositol lipids activate PRKs and small Rho-family GTPases bind to the homology region 1 (HR1) to regulate PRK kinase activity (7).

---

Note: This product is for in vitro research use only and is not intended for use in humans or animals.