

Rabbit cGKI (cGKI beta) Polyclonal Antibody | anti-PRKG1 antibody

cGKI (cGKI beta) Antibody (C-term)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA285984	Rabbit	Human, mouse (Predicted Reactivity: Bovine)	Immunohistochemistry, ELISA, Western Blot

PRODUCT SYNONYMS

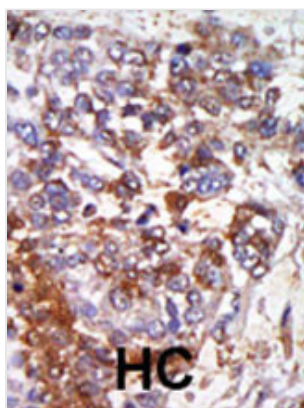
cGKI (cGKI beta); Polyclonal Antibody; cGKI (cGKI beta) Antibody (C-term); cGMP-dependent protein kinase 1; cGK 1; cGK1; cGMP-dependent protein kinase I; cGKI; PRKG1; PRKG1B; PRKGR1A; PRKGR1B; anti-PRKG1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, mouse (Predicted Reactivity: Bovine)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This cGKI (cGKI beta) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 629-660 amino acids from the C-terminal region of human cGKI beta.
Purity/Purification	Purified Rabbit Polyclonal Antibody (Pab)
Form/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.
Concentration	Vial Concentration: 1.558 (varies by lot)
Sequence Positions	629-660
Sequence Length	671
Applicable Applications for anti-PRKG1 antibody	IHC (Immunohistochemistry), ELISA, WB (Western Blot)
Antigen Type	Synthetic Peptide
Target/Specificity	This cGKI (cGKI beta) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 629-660 amino acids from the C-terminal region of human cGKI beta.
Antigen Source	HUMAN
Precautions	cGKI (cGKI beta) Antibody (C-term) is for research use only

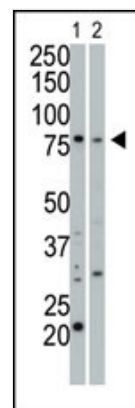
Function	Serine/threonine protein kinase that acts as key mediator of the nitric oxide (NO)/cGMP signaling pathway. GMP binding activates PRKG1, which phosphorylates serines and threonines on many cellular proteins. Numerous protein targets for PRKG1 phosphorylation are implicated in modulating cellular calcium, but the contribution of each of these targets may vary substantially among cell types. Proteins that are phosphorylated by PRKG1 regulate platelet activation and adhesion, smooth muscle contraction, cardiac function, gene expression, feedback of the NO-signaling pathway, and other processes involved in several aspects of the CNS like axon guidance, hippocampal and cerebellar learning, circadian rhythm and nociception. Smooth muscle relaxation is mediated through lowering of intracellular free calcium, by desensitization of contractile proteins to calcium, and by decrease in the contractile state of smooth muscle or in platelet activation. Regulates intracellular calcium levels via several pathways: phosphorylates MRV1/IRAG and inhibits IP3- induced Ca(2+) release from intracellular stores, phosphorylation of KCNMA1 (BKCa) channels decreases intracellular Ca(2+) levels, which leads to increased opening of this channel. PRKG1 phosphorylates the canonical transient receptor potential channel (TRPC) family which inactivates the associated inward calcium current. Another mode of action of NO/cGMP/PKG1 signaling involves PKGI-mediated inactivation of the Ras homolog gene family member A (RhoA). Phosphorylation of RHOA by PRKG1 blocks the action of this protein in myriad processes: regulation of RHOA translocation; decreasing contraction; controlling vesicle trafficking, reduction of myosin light chain phosphorylation resulting in vasorelaxation. Activation of PRKG1 by NO signaling alters also gene expression in a number of tissues. In smooth muscle cells, increased cGMP and PRKG1 activity influence expression of smooth muscle-specific contractile proteins, levels of proteins in the NO/cGMP signaling pathway, down-regulation of the matrix proteins osteopontin and thrombospondin-1 to limit smooth muscle cell migration and phenotype. Regulates vasodilator-stimulated phosphoprotein (VASP) functions in platelets and smooth muscle.
Tissue Location	Primarily expressed in lung and placenta.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.

IMAGES



IHC (Immunohistochemistry)

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.



WB (Western Blot)

The anti-cGKI beta Pab is used in Western blot to detect cGKI beta in 293 cell lysate (Lane 1) and mouse small intestine tissue lysate (Lane 2).

ADDITIONAL INFORMATION

Related Product Information for anti-PRKG1 antibody	Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the γ phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains.
Product Categories/Family for anti-PRKG1 antibody	Cardiovascular ; Signal Transduction
References	Orstavik, S., et al., Genomics 42(2):311-318 (1997). Tamura, N., et al., Hypertension 27 (3 Pt 2), 552-557 (1996).

NCBI AND UNIPROT INFORMATION

NCBI GI #	148612818
NCBI GeneID	5592
NCBI Accession #	NP_001091982.1; NP_006249.1
NCBI GenBank Nucleotide #	NM_001098512.2
UniProt Accession #	Q13976; P14619; Q5JP05; Q5JSJ6; Q6P5T7; A5YM56; B3KSF3; E2PU10
Molecular Weight	76364
NCBI Official Full Name	cGMP-dependent protein kinase 1 isoform 1
NCBI Official Synonym Full Names	protein kinase, cGMP-dependent, type I
NCBI Official Symbol	PRKG1
NCBI Official Synonym Symbols	1; PKG; cGK; AAT8; cGK1; cGKI; cGK 1; PRKG1B; PRKGR1B; cGKI-BETA; cGKI-alpha
NCBI Protein Information	cGMP-dependent protein kinase 1
UniProt Protein Name	cGMP-dependent protein kinase 1
UniProt Gene Name	PRKG1
UniProt Synonym Gene Names	PRKG1B; PRKGR1A; PRKGR1B; cGK 1; cGK1; cGKI
UniProt Entry Name	KGP1_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/cgki-cgki-beta-antibody-immunohistochemistry-western-blot-elisa/285984>