

Rabbit cGKI/PRKG1 Polyclonal Antibody | anti-PRKG1 antibody

Anti-cGKI/PRKG1 Antibody

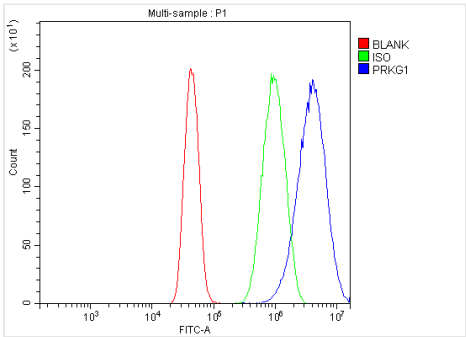
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19246	Rabbit	Human, Mouse, Rat	Western Blot, Immunohistochemistry, Immunocytochemistry, Immunofluorescence, Flow Cytometry, Functional Assay, ELISA

PRODUCT SYNONYMS

cGKI/PRKG1; Polyclonal Antibody; Anti-cGKI/PRKG1 Antibody; PRKG1; PRKG1B; PRKGR1A; PRKGR1B; cGMP-dependent protein kinase 1; cGK 1; cGK1; cGMP-dependent protein kinase I; cGKI; protein kinase cGMP-dependent 1; anti-PRKG1 antibody

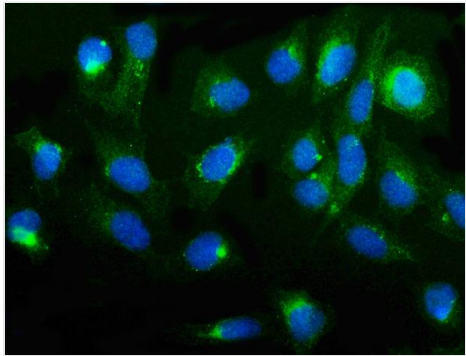
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for cGKI/PRKG1 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Applicable Applications for anti-PRKG1 antibody	WB (Western Blot), IHC (Immunohistochemistry), ICC (Immunocytochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry), ELISA (Direct ELISA)
Application Notes	WB: 0.25-0.5ug/ml Human, Mouse, Rat IHC-P: 2-5ug/ml Human, Mouse, Rat ICC/IF: 5ug/ml Human FC/FACS/FCM: 1-3ug/1x106 cells Human, Rat Direct ELISA: 0.1-0.5ug/ml Human
Immunogen	E Coli-derived human cGKI/PRKG1 recombinant protein (Position: S2-Q44).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



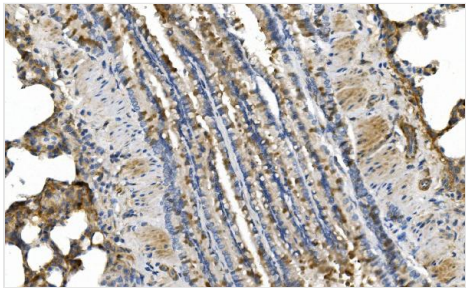
FCM (Flow Cytometry)

Figure 7. Flow Cytometry analysis of U251 cells using anti-CGKI/PRKG1 antibody (AAA19246).Overlay histogram showing U251 cells stained with AAA19246 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CGKI/PRKG1 Antibody (AAA19246, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



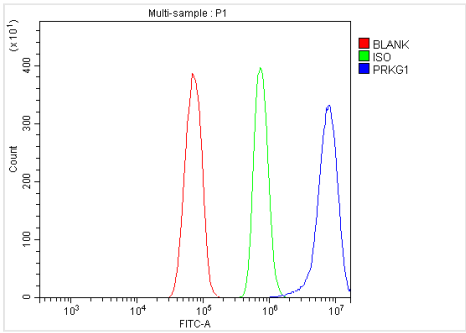
IF (Immunofluorescence)

Figure 5. IF analysis of CGKI/PRKG1 using anti- CGKI/PRKG1 antibody (AAA19246).CGKI/PRKG1 was detected in immunocytochemical section of U20S cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5μg/mL rabbit anti-CGKI/PRKG1 Antibody (AAA19246) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



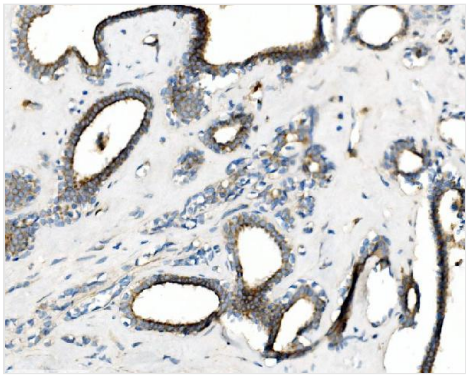
IHC (Immunohistochemistry)

Figure 3. IHC analysis of CGKI/PRKG1 using anti-CGKI/PRKG1 antibody (AAA19246).CGKI/PRKG1 was detected in paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-CGKI/PRKG1 Antibody (AAA19246) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



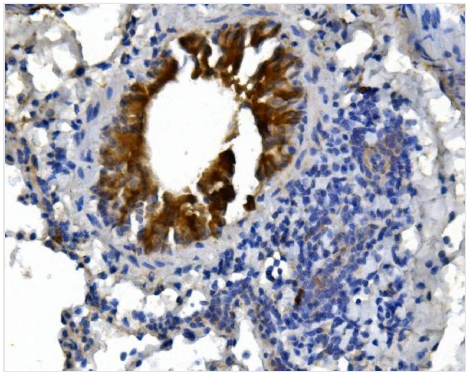
FCM (Flow Cytometry)

Figure 6. Flow Cytometry analysis of RH35 cells using anti-CGKI/PRKG1 antibody (AAA19246).Overlay histogram showing RH35 cells stained with AAA19246 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CGKI/PRKG1 Antibody (AAA19246, 1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IHC (Immunohistochemistry)

Figure 4. IHC analysis of CGKI/PRKG1 using anti-CGKI/PRKG1 antibody (AAA19246).CGKI/PRKG1 was detected in paraffin-embedded section of hman breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-CGKI/PRKG1 Antibody (AAA19246) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



IHC (Immunohistochemistry)

Figure 2. IHC analysis of CGKI/PRKG1 using anti-CGKI/PRKG1 antibody (AAA19246).CGKI/PRKG1 was detected in paraffin-embedded section of mouse lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2μg/ml rabbit anti-CGKI/PRKG1 Antibody (AAA19246) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).

ADDITIONAL INFORMATION

Related Product Information for anti-PRKG1 antibody	cGMP-dependent protein kinase 1, alpha isozyme is an enzyme that in humans is encoded by the PRKG1 gene. Mammals have three different isoforms of cyclic GMP-dependent protein kinase (Ialpha, Ibeta, and II). These PRKG isoforms act as key mediators of the nitric oxide/cGMP signaling pathway and are important components of many signal transduction processes in diverse cell types. This PRKG1 gene on human chromosome 10 encodes the soluble Ialpha and Ibeta isoforms of PRKG by alternative transcript splicing. A separate gene on human chromosome 4, PRKG2, encodes the membrane-bound PRKG isoform II. The PRKG1 proteins play a central role in regulating cardiovascular and neuronal functions in addition to relaxing smooth muscle tone, preventing platelet aggregation, and modulating cell growth. This gene is most strongly expressed in all types of smooth muscle, platelets, cerebellar Purkinje cells, hippocampal neurons, and the lateral amygdala. Isoforms Ialpha and Ibeta have identical cGMP-binding and catalytic domains but differ in their leucine/isoleucine zipper and autoinhibitory sequences and therefore differ in their dimerization substrates and kinase enzyme activity.
References	1. Burgoyne, J. R., Madhani, M., Cuello, F., Charles, R. L., Brennan, J. P., Schroder, E., Browning, D. D., Eaton, P. Cysteine redox sensor in PKGI-alpha enables oxidant-induced activation. <i>Science</i> 317: 1393-1397, 2007. 2. Foller, M., Feil, S., Ghoreschi, K., Koka, S., Gerling, A., Thunemann, M., Hofmann, F., Schuler, B., Vogel, J., Pichler, B., Kasinathan, R. S., Nicolay, J. P., Huber, S. M., Lang, F., Feil, R. Anemia and splenomegaly in cGKI-deficient mice. <i>Proc. Nat. Acad. Sci.</i> 105: 6771-6776, 2008. 3. Guo, D., Regalado, E., Casteel, D. E., Santos-Cortez, R. L., Gong, L., Kim, J. J., Dyack, S., Horne, S. G., Chang, G., Jondeau, G., Boileau, C., Coselli, J. S., and 10 others. Recurrent gain-of-function mutation in PRKG1 causes thoracic aortic aneurysms and acute aortic dissections. <i>Am. J. Hum. Genet.</i> 93: 398-404, 2013.

NCBI AND UNIPROT INFORMATION

NCBI GI #	148612818
NCBI GeneID	5592
NCBI Accession #	NP_001091982.1
NCBI GenBank Nucleotide #	NM_001098512.2
UniProt Accession #	Q13976 ; P14619 ; Q5JSJ6 ; Q6P5T7 ; E2PU10
Molecular Weight	76,364 Da
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; protein kinase, cGMP-dependent, regulatory, type I, beta
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-prkg1-antibody-western-blot-immunohistochemistry-immunocytochemistry-immunofluorescence-flow-cytometry-direct-elisa-elisa/19246>