Anti-PRKG1 Antibody

Catalog Number: *A01708-3*

BOSTER®
antibody and ELISA experts
BOSTER BIOLOGICAL TECHNOLOGY
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Basic Information

Product Name	Anti-PRKG1 Antibody
Gene Name	PRKG1
Source	Rabbit
Clonality	Polyclonal
Isotype	IgG
Species Reactivity	human, mouse, rat
Tested Application	WB, IHC, ICC/IF, FCM, ELISA
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	E. coli-derived human cGKI/PRKG1 recombinant protein (Position: S2-Q44). Human PRKG1 shares 100% amino acid (aa) sequence identity with mouse PRKG1.
Concentration	500 ug/ml
Purification	Immunogen affinity purified.
Observed MW	78 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 Flow Cytometry (Fixed): 1:50-200 Enzyme linked immunosorbent assay (ELISA): 1:100-1000 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied.

Background Information

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

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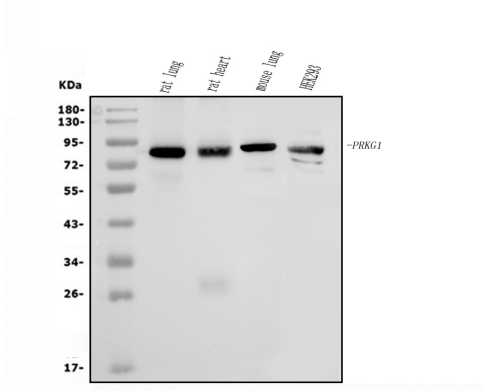
cGMP-binding and catalytic domains but differ in their leucine/isoleucine zipper and autoinhibitory sequences and therefore differ in their dimerization substrates and kinase enzyme activity.

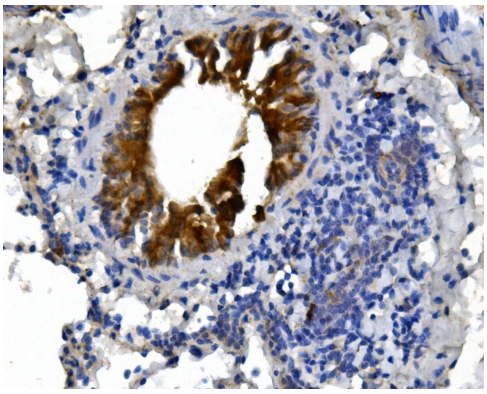
Reference

Anti-PRKG1 Antibody被引用在1文献中。

Selected Validation Data



Western blot analysis of PRKG1 using anti-PRKG1 antibody (A01708-3). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: rat lung tissue lysates,
Lane 2: rat heart tissue lysates,
Lane 3: mouse lung tissue lysates,
Lane 4: human HEK293 whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-PRKG1 antigen affinity purified polyclonal antibody (A01708-3) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for PRKG1 at approximately 78 kDa. The expected band size for PRKG1 is at 76 kDa.



IHC analysis of PRKG1 using anti-PRKG1 antibody (A01708-3).
PRKG1 was detected in a paraffin-embedded section of mouse lung tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-PRKG1 Antibody (A01708-3) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.

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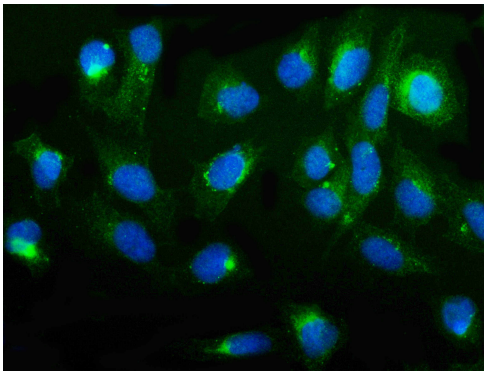
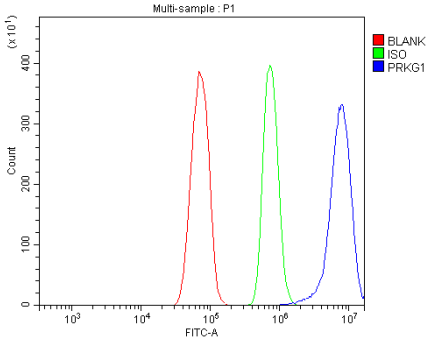


IF analysis of PRKG1 using anti-PRKG1 antibody (A01708-3).
PRKG1 was detected in an immunocytochemical section of U2OS cells. The section was incubated with rabbit anti-PRKG1 Antibody (A01708-3) at a dilution of 1:100. DyLight®488 Conjugated Goat Anti-Rabbit IgG (Green) (Catalog # BA1127) was used as secondary antibody. The section was counterstained with DAPI (Catalog # AR1176) (Blue).



Flow Cytometry analysis of RH-35 cells using anti-PRKG1 antibody (A01708-3).
Overlay histogram showing RH-35 cells stained with A01708-3 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PRKG1 Antibody (A01708-3) at 1:100 dilution for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.