

Anti-Plakophilin 2/PKP2 Antibody Picoband®

Catalog Number: A02146-1

About PKP2

Plakophilin-2 is a protein that in humans is encoded by the PKP2 gene. This gene encodes a member of the arm-repeat (armadillo) and plakophilin gene families. Plakophilin proteins contain numerous armadillo repeats, localize to cell desmosomes and nuclei, and participate in linking cadherins to intermediate filaments in the cytoskeleton. This gene may regulate the signaling activity of beta-catenin and is required to maintain transcription of genes that control intracellular calcium cycling including ryanodine receptor 2, ankyrin-B, triadin, and calcium channel, voltage-dependent, L type, alpha 1C. Mutations in this gene are associated with different inherited cardiac conditions including Arrhythmogenic Cardiomyopathy, Brugada Syndrome, and Idiopathic Ventricular Fibrillation. A processed pseudogene with high similarity to this gene has been mapped to chromosome 12p13.

Overview

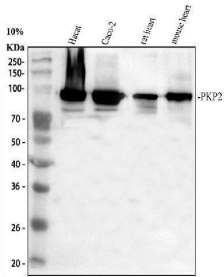
Product Name	Anti-Plakophilin 2/PKP2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Plakophilin 2/PKP2 Antibody Picoband® catalog # A02146-1. Tested in ELISA, Flow Cytometry, ICC/IF, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	Q99959

Technical Details

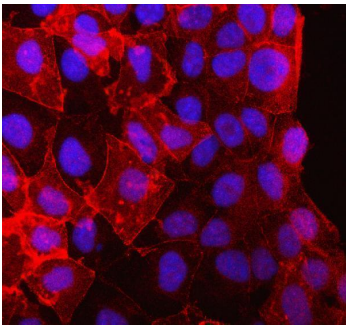
Immunogen	E.coli-derived mouse Plakophilin 2/PKP2 recombinant protein (Position: E9-D866).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry(Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

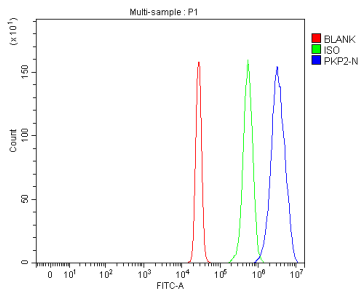
Anti-Plakophilin 2/PKP2 Antibody Picoband® (A02146-1) Images



Western blot analysis of Plakophilin 2/PKP2 using anti-Plakophilin 2/PKP2 antibody (A02146-1). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hacat whole cell lysates, Lane 2: human CACO-2 whole cell lysates, Lane 3: rat heart tissue lysates, Lane 4: mouse heart tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Plakophilin 2/PKP2 antigen affinity purified polyclonal antibody (Catalog # A02146-1) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for Plakophilin 2/PKP2 at approximately 100 kDa. The expected band size for Plakophilin 2/PKP2 is at 97 kDa.



IF analysis of Plakophilin 2/PKP2 using anti-Plakophilin 2/PKP2 antibody (A02146-1). Plakophilin 2/PKP2 was detected in an immunocytochemical section of CACO-2 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-Plakophilin 2/PKP2 Antibody (A02146-1) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of HepG2 cells using anti-Plakophilin 2/PKP2 antibody (A02146-1). Overlay histogram showing HepG2 cells stained with A02146-1 (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-Plakophilin 2/PKP2 Antibody (A02146-1, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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Anti-Plakophilin 2/PKP2 Antibody

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