

Anti-Kv1.4/KCNA4 Antibody Picoband™

Catalog Number: PB9807

About KCNA4

Potassium voltage-gated channel subfamily A member 4, also known as Kv1.4 or PCN2, is a protein that in humans is encoded by the KCNA4 gene. This gene encodes a member of the potassium channel, voltage-gated, shaker-related subfamily. It is mapped to 11p14.1. KCNA4 belongs to the A-type potassium current class, the members of which may be important in the regulation of the fast repolarizing phase of action potentials in heart and thus may influence the duration of cardiac action potential. KCNA4 also contributes to the cardiac transient outward potassium current (Ito1), the main contributing current to the repolarizing phase 1 of the cardiac action potential. This gene has been shown to interact with DLG4, KCNA2 and DLG1.

Overview

Product Name	Anti-Kv1.4/KCNA4 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-Kv1.4/KCNA4 Antibody Picoband™ catalog # PB9807. Tested in IHC, WB applications. This antibody reacts with Human.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P22459

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Kv1.4, different from the related mouse sequence by two amino acids, and from the related rat sequence by one amino acid.
Predicted Reactive Species	Bovine, Monkey, Rabbit
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
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 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, By Heat Western blot, 0.1-0.5ug/ml, Human

Anti-Kv1.4/KCNA4 Antibody Picoband™ (PB9807) Images

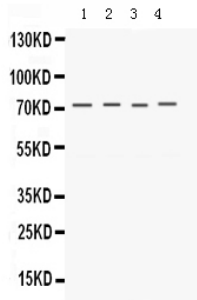


Figure 1. Western blot analysis of Kv1.4 using anti-Kv1.4 antibody (PB9807).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 40 ug of sample under reducing conditions.

Lane 1: HELA Whole Cell Lysate,
Lane 2: COLO320 Whole Cell Lysate,
Lane 3: HT1080 Whole Cell Lysate,
Lane 4: PANC Whole Cell Lysate.

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-Kv1.4 antigen affinity purified polyclonal antibody (Catalog # PB9807) 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 Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Kv1.4 at approximately 73 kDa. The expected band size for Kv1.4 is at 73 kDa.

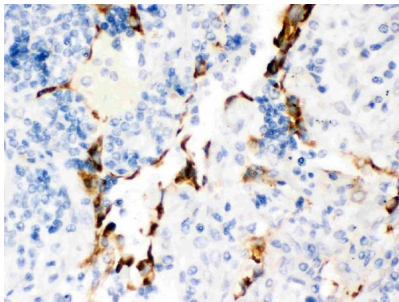


Figure 2. IHC analysis of Kv1.4 using anti-Kv1.4 antibody (PB9807).

Kv1.4 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-Kv1.4 Antibody (PB9807) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

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