

Anti-Kv1.1 potassium channel/KCNA1 Antibody Picoband®

Catalog Number: A01813-1

About KCNA1

Potassium voltage-gated channel subfamily A member 1, also known as Kv1.1, is a shaker related voltage-gated potassium channel that in humans is encoded by the KCNA1 gene. It is mapped to 12p13.32. The protein functions as a potassium selective channel through which the potassium ion may pass through in consensus with the electrochemical gradient. The N-terminus of the channel is associated with beta subunits that can modify the inactivation properties of the channel as well as affect expression levels. The C-terminus of the channel is complexed to a PDZ domain protein that is responsible for channel targeting.

Overview

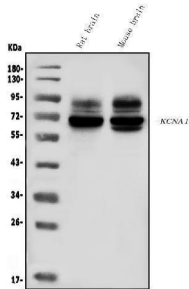
Product Name	Anti-Kv1.1 potassium channel/KCNA1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Kv1.1 potassium channel/KCNA1 Antibody Picoband® catalog # A01813-1. Tested in ELISA, Flow Cytometry, IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. 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, IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Na ₃ .
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	Q09470

Technical Details

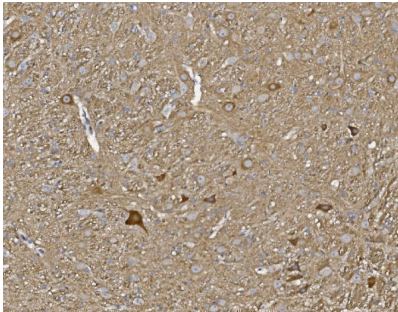
Immunogen	E. coli-derived human KCNA1 recombinant protein (Position: E7-N477).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	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	Western blot, 0.1-0.5ug/ml, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Rat Immunofluorescence, 5ug/ml, Mouse, Rat Flow Cytometry (Fixed), 1-3ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5ug/ml, -

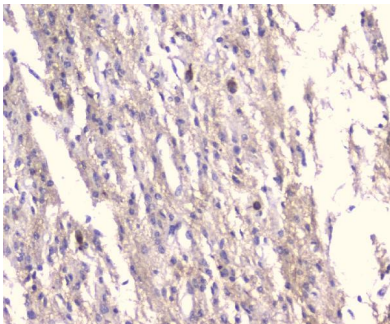
Anti-Kv1.1 potassium channel/KCNA1 Antibody Picoband® (A01813-1) Images



Western blot analysis of KCNA1 using anti-KCNA1 antibody (A01813-1). 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 50ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: mouse brain tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-KCNA1 antigen affinity purified polyclonal antibody (Catalog # A01813-1) 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 Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for KCNA1 at approximately 56KD. The expected band size for KCNA1 is at 56KD.

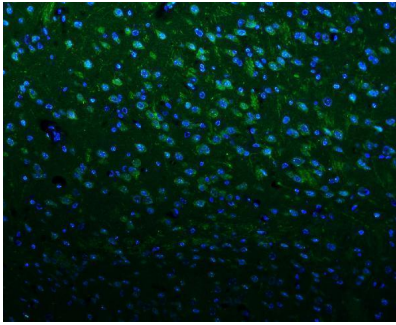


IHC analysis of KCNA1 using anti-KCNA1 antibody (A01813-1). KCNA1 was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-KCNA1 Antibody (A01813-1) 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.

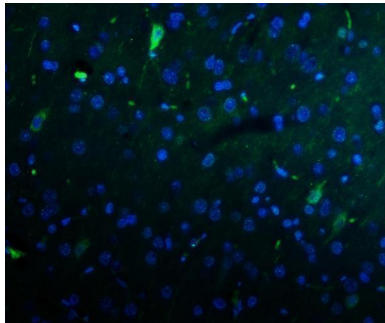


IHC analysis of KCNA1 using anti-KCNA1 antibody (A01813-1). KCNA1 was detected in paraffin-embedded section of human glioma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml rabbit anti-KCNA1 Antibody (A01813-1) 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.

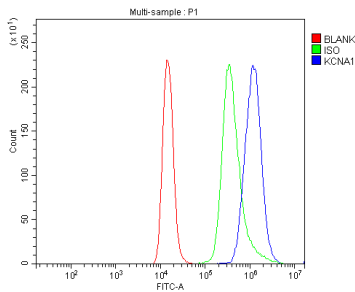
IF analysis of KCNA1 using anti-KCNA1 antibody (A01813-1). KCNA1 was detected in paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-KCNA1 Antibody (A01813-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary



antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®488 Conjugated Avidin (BA1128). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of KCNA1 using anti-KCNA1 antibody (A01813-1). KCNA1 was detected in paraffin-embedded section of rat brain 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 5ug/mL rabbit anti-KCNA1 Antibody (A01813-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using DyLight®488 Conjugated Avidin (BA1128). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of Raji cells using anti-KCNA1 antibody (A01813-1). Overlay histogram showing Raji cells stained with A01813-1 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-KCNA1 Antibody (A01813-1, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/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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