

## Anti-Maxi Potassium channel alpha/KCNMA1 Antibody Picoband®

Catalog Number: PB9227

### About KCNMA1

Calcium-activated potassium channel subunit alpha-1 also known as KCa1.1, or BK channel for short, is a voltage gated potassium channel encoded by the KCNMA1 gene and characterized by their large conductance of potassium ions (K<sup>+</sup>) through cell membranes. This gene is located on 10q22.3. BK channels are activated (opened) by changes in membrane electrical potential and/or by increases in concentration of intracellular calcium ion (Ca<sup>2+</sup>). It is essential for the regulation of several key physiological processes including smooth muscle tone and neuronal excitability. BK channels also contribute to the behavioral effects of ethanol in the worm *C. elegans* under high concentrations (> 100 mM, or approximately 0.50% BAC). It remains to be determined if BK channels contribute to intoxication in humans.

### Overview

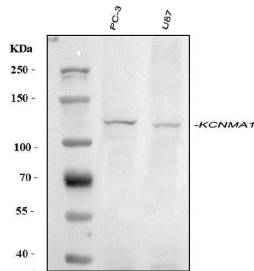
Product Name	Anti-Maxi Potassium channel alpha/KCNMA1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Maxi Potassium channel alpha/KCNMA1 Antibody Picoband® catalog # PB9227. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.01mg NaN <sub>3</sub> . *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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	Q12791

### Technical Details

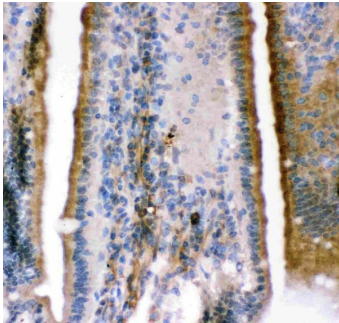
Immunogen	<i>E. coli</i> -derived human KCNMA1 recombinant protein (Position: K124-Q467). Human KCNMA1 shares 99% amino acid (aa) sequence identity with both mouse and rat KCNMA1.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

	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, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat

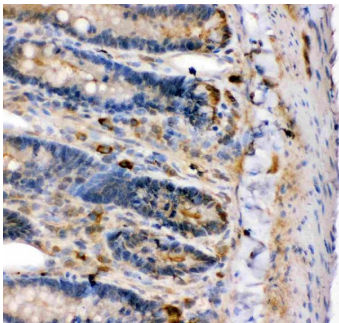
## Anti-Maxi Potassium channel alpha/KCNMA1 Antibody Picoband® (PB9227) Images



Western blot analysis of KCNMA1 using anti-KCNMA1 antibody (PB9227). 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 30ug of sample under reducing conditions. Lane 1: human PC-3 whole cell lysates, Lane 2: human U87 whole cell 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-KCNMA1 antigen affinity purified polyclonal antibody (Catalog # PB9227) 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 1:10000 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 KCNMA1 at approximately 110-138 kDa. The expected band size for KCNMA1 is at 138KD.

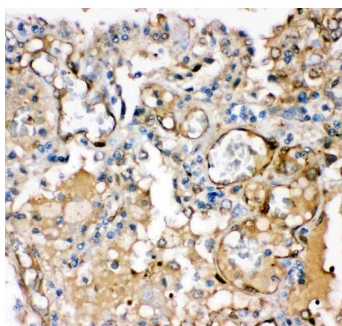


IHC analysis of KCNMA1 using anti-KCNMA1 antibody (PB9227). KCNMA1 was detected in paraffin-embedded section of mouse intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-KCNMA1 Antibody (PB9227) 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 KCNMA1 using anti-KCNMA1 antibody (PB9227). KCNMA1 was detected in paraffin-embedded section of rat intestine tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-KCNMA1 Antibody (PB9227) 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 KCNMA1 using anti-KCNMA1 antibody (PB9227). KCNMA1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was



blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-KCNMA1 Antibody (PB9227) 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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