10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-KCNMA1 Picoband Antibody

Catalog # ABO11918

Specification

Anti-KCNMA1 Picoband Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	Q12791
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Calcium-activated potassium channel subunit alpha-1(KCNMA1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-KCNMA1 Picoband Antibody - Additional Information

Gene ID 3778

Other Names
Calcium-activated potassium channel subunit alpha-1, BK channel, BKCA alpha, Calcium-activated potassium channel, subfamily M subunit alpha-1, K(VCA)alpha, KCa1.1, Maxi K channel, MaxiK, Slo-alpha, Slo1, Slowpoke homolog, Slo homolog, hSlo, KCNMA1, KCNMA, SLO

Calculated MW
137560 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human

Subcellular Localization
Cell membrane ; Multi-pass membrane protein .

Tissue Specificity
Widely expressed. Except in myocytes, it is almost ubiquitously expressed. .

Protein Name
Calcium-activated potassium channel subunit alpha-1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human KCNMA1 recombinant protein (Position: K124-Q467). Human KCNMA1 shares 99% amino acid (aa) sequence identity with both mouse and rat KCNMA1.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Sequence Similarities
Belongs to the potassium channel family. Calcium- activated (TC 1.A.1.3) subfamily. KCa1.1/KCNMA1 sub-subfamily.

Anti-KCNMA1 Picoband Antibody - Protein Information

Name KCNMA1 (HGNC:6284)

Synonyms KCNMA, SLO

Function
Potassium channel activated by both membrane depolarization or increase in cytosolic Ca(2+) that mediates export of K(+) (PubMed:14523450, PubMed:29330545, PubMed:31152168). It is also activated by the concentration of cytosolic Mg(2+). Its activation dampens the excitatory events that elevate the cytosolic Ca(2+) concentration and/or depolarize the cell membrane. It therefore contributes to repolarization of the membrane potential. Plays a key role in controlling excitability in a number of systems, such as regulation of the contraction of smooth muscle, the tuning of hair cells in the cochlea, regulation of transmitter release, and innate immunity. In smooth muscles, its activation by high level of Ca(2+), caused by ryanodine receptors in the sarcoplasmic reticulum, regulates the membrane potential. In cochlea cells, its number and kinetic properties partly determine the characteristic frequency of each hair cell and thereby helps to establish a tonotopic map. Kinetics of KCNMA1 channels are determined by alternative splicing, phosphorylation status and its combination with modulating beta subunits. Highly sensitive to both iberiotoxin (IbTx) and charybdotoxin (CTX). Possibly induces sleep when activated by melatonin and through melatonin receptor MTNR1A- dependent dissociation of G-beta and G-gamma subunits, leading to increased sensitivity to Ca(2+) and reduced synaptic transmission (PubMed:32958651).

Cellular Location
Cell membrane; Multi-pass membrane protein

Tissue Location
Widely expressed. Except in myocytes, it is almost ubiquitously expressed.

Anti-KCNMA1 Picoband Antibody - Protocols

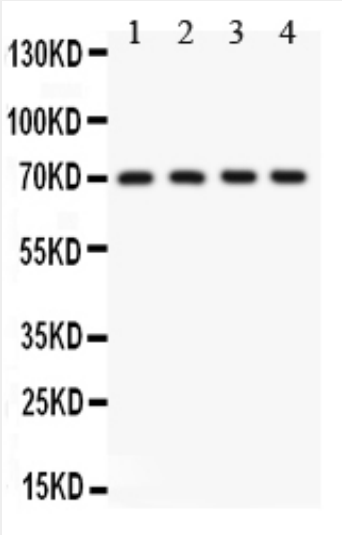
Provided below are standard protocols that you may find useful for product applications.

- Western Blot

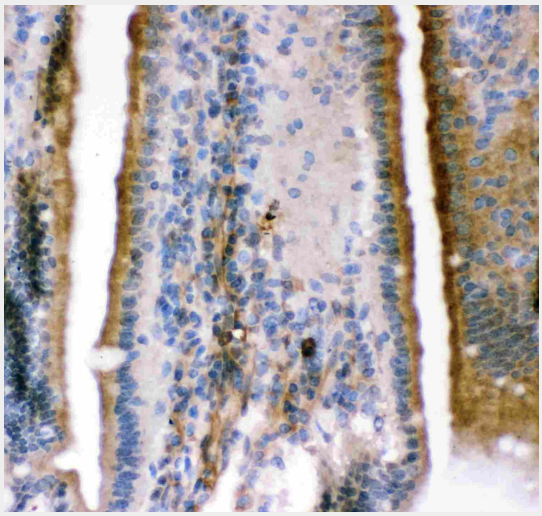
10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-KCNMA1 Picoband Antibody - Images

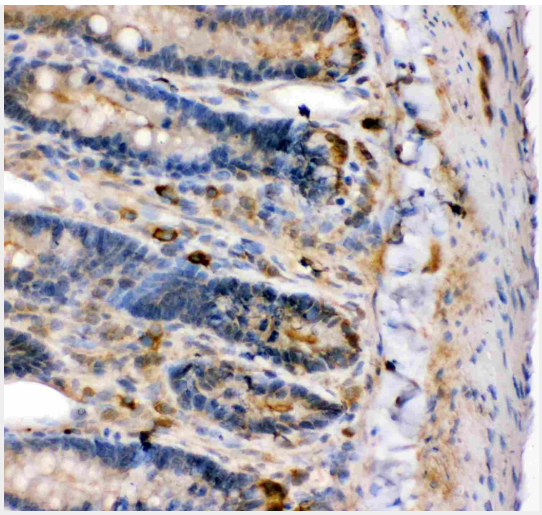


Anti- KCNMA1antibody, ABO11918, Western blottingAll lanes: Anti KCNMA1 (ABO11918) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Rat Testis Tissue Lysate at 50ugLane 3: Mouse Brain Tissue Lysate at 50ugLane 4: Mouse Testis Tissue Lysate at 50ugPredicted bind size: 137KDObserved bind size: 70KD

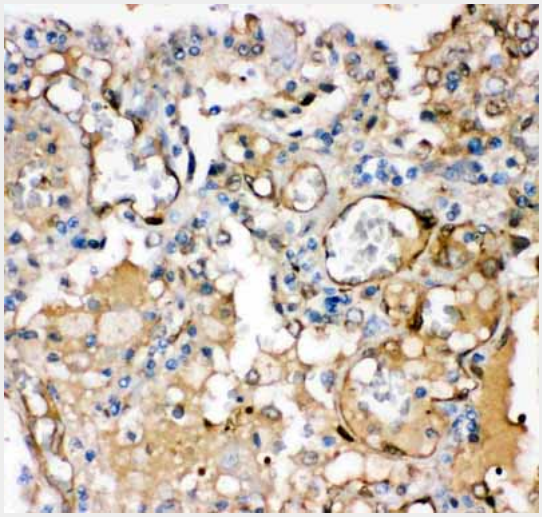


Anti- KCNMA1antibody, ABO11918,IHC(P)IHC(P): Mouse Intestine Tissue

10320 Camino Santa Fe, Suite A
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Anti- KCNMA1antibody, ABO11918,IHC(P)IHC(P): Rat Intestine Tissue



Anti- KCNMA1antibody, ABO11918,IHC(P)IHC(P): Human Lung Cancer Tissue

Anti-KCNMA1 Picoband Antibody - Background

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+) 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 (Ca2+). 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.