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Product datasheet

Anti-Maxi Potassium channel alpha/SLO antibody ab219072

1 References 1 Image

Overview

Product name	Anti-Maxi Potassium channel alpha/SLO antibody
Description	Rabbit polyclonal to Maxi Potassium channel alpha/SLO
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat, Rabbit, Horse, Chicken, Hamster, Cow, Pig, Monkey, Zebrafish
Immunogen	Synthetic peptide corresponding to Human Maxi Potassium channel alpha/SLO (internal sequence). (15 amino acid peptide). Database link: **Q12791**
Positive control	Human breast, vessel tissue.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.4 Preservative: 0.099% Sodium azide Constituent: 99% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab219072 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use a concentration of 20 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

Function Potassium channel activated by both membrane depolarization or increase in cytosolic Ca(2+) that mediates export of K(+). 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).

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

Involvement in disease Generalized epilepsy and paroxysmal dyskinesia

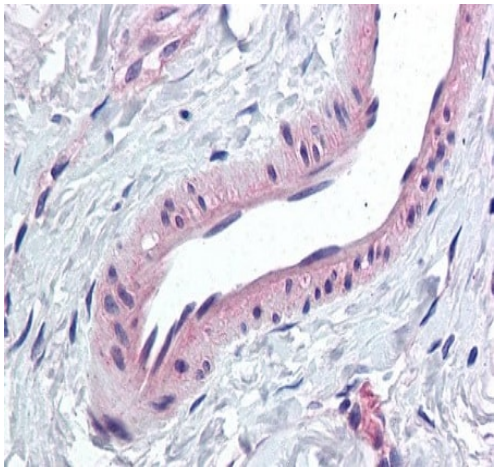
Sequence similarities Belongs to the potassium channel family. Calcium-activated (TC 1.A.1.3) subfamily. KCa1.1/KCNMA1 sub-subfamily.
Contains 1 RCK N-terminal domain.

Domain The S0 segment is essential for the modulation by the accessory beta subunits KCNMB1, KCNMB2, KCNMB3 and KCNMB4.
The S4 segment, which is characterized by a series of positively charged amino acids at every third position, is part of the voltage-sensor.
The pore-forming domain (also referred as P region) is imbedded into the membrane, and forms the selectivity filter of the pore. It contains the signature sequence of potassium channels that displays selectivity to potassium.
The RCK N-terminal domain mediates the homotetramerization, thereby promoting the assembly of monomers into functional potassium channel. It includes binding sites for Ca(2+) and Mg(2+). The calcium bowl constitutes one of the Ca(2+) sensors and probably acts as a Ca(2+)-binding site. There are however other Ca(2+) sensors regions required for activation of the channel.
The heme-binding motif mediates inhibition of channel activation by heme. Carbon monoxide-bound heme leads to increased channel activation.

Post-translational modifications Phosphorylated (Probable). Phosphorylation by kinases such as PKA and/or PKG. In smooth muscles, phosphorylation affects its activity.
Palmitoylation by ZDHHC22 and ZDHHC23 within the intracellular linker between the S0 and S1 transmembrane domains regulates localization to the plasma membrane. Depalmitoylated by

	LYPLA1 and LYPLAL1, leading to retard exit from the trans-Golgi network.
Cellular localization	Cell membrane.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Maxi Potassium channel alpha/SLO antibody (ab219072)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human breast, vessel tissue labeling Maxi Potassium channel alpha/SLO with ab219072 at 20 µg/ml.

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