


Product datasheet

Anti-Maxi Potassium channel alpha antibody ab104711

1 Image

Overview

Product name	Anti-Maxi Potassium channel alpha antibody
Description	Rabbit polyclonal to Maxi Potassium channel alpha
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Sheep, Rabbit, Horse, Chicken, Guinea pig, Cow, Cat, Dog, Pig, Zebrafish 
Immunogen	Synthetic peptide corresponding to a region within internal sequence amino acids 641-690 (ESRSRKRILI NPGNHLKIQE GTLGFFIASD AKEVKRAFFY CKACHDDITD) of Human Maxi Potassium channel alpha (NP_001014797). Run BLAST with ExPASy Run BLAST with NCBI
Positive control	HeLa cell lysate

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: None Constituents: 2% Sucrose, PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

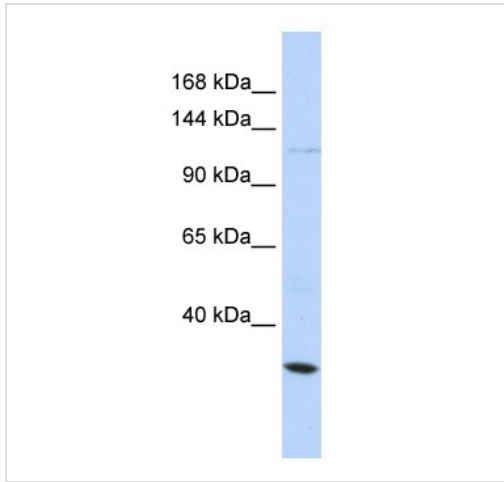
Applications

Our [Abpromise guarantee](#) covers the use of **ab104711** 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
WB		Use a concentration of 1 µg/ml. Predicted molecular weight: 131 kDa. Good results were obtained when blocked with 5% non-fat dry milk in 0.05% PBS-T.
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		<p>The S0 segment is essential for the modulation by the accessory beta subunits KCNMB1, KCNMB2, KCNMB3 and KCNMB4.</p> <p>The S4 segment, which is characterized by a series of positively charged amino acids at every third position, is part of the voltage-sensor.</p> <p>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.</p> <p>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+).</p> <p>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.</p> <p>The heme-binding motif mediates inhibition of channel activation by heme. Carbon monoxide-bound heme leads to increased channel activation.</p>
Post-translational modifications		<p>Phosphorylated (Probable). Phosphorylation by kinases such as PKA and/or PKG. In smooth muscles, phosphorylation affects its activity.</p> <p>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.</p>
Cellular localization		Cell membrane.

Images



Anti-Maxi Potassium channel alpha antibody
(ab104711) at 1 µg/ml + HeLa cell lysate at 10
µg

Predicted band size : 131 kDa

Western blot - Maxi Potassium channel alpha
antibody (ab104711)

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