

## Rabbit MaxiK alpha Polyclonal Antibody | anti-KCNMA1 antibody

MaxiK alpha Antibody

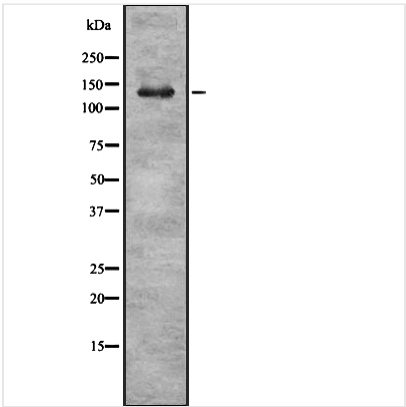
| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                              |
|-----------|--------|-------------------|-------------------------------------------|
| AAA327529 | Rabbit | Human, Mouse, Rat | ELISA, Immunohistochemistry, Western Blot |

### PRODUCT SYNONYMS

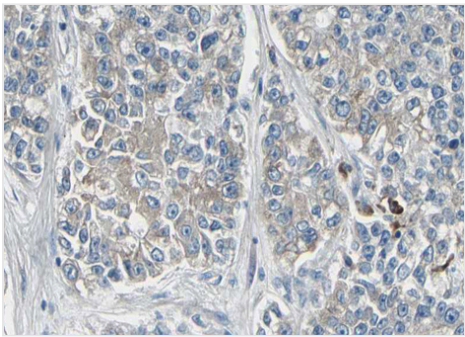
MaxiK alpha; Polyclonal Antibody; MaxiK alpha Antibody; subfamily M subunit alpha-1; BK channel; BKCA alpha; BKCA alpha subunit; BKTm; Calcium-activated potassium channel; Calcium-activated potassium channel subunit alpha-1; Drosophila slowpoke like; hSlo; K(VCA)alpha; KCa1.1; KCMA1\_HUMAN; KCNMA; KCNMA1; Maxi K channel; Maxi Potassium channel alpha; MaxiK; SAKCA; SLO alpha; SLO; Slo homolog; Slo-alpha; Slo1; Slowpoke homolog; anti-KCNMA1 antibody

### PRODUCT SPECIFICATIONS

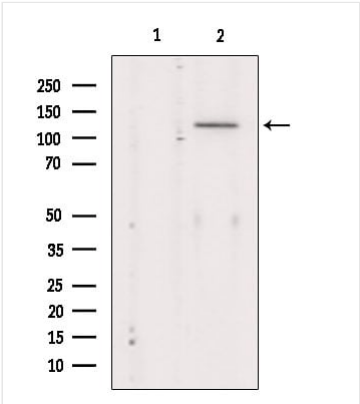
|                                                  |                                                                                                |
|--------------------------------------------------|------------------------------------------------------------------------------------------------|
| Host                                             | Rabbit                                                                                         |
| Reactivity                                       | Human, Mouse, Rat                                                                              |
| Clonality                                        | Polyclonal                                                                                     |
| Isotype                                          | IgG                                                                                            |
| Specificity                                      | MaxiK alpha antibody detects endogenous levels of total MaxiK alpha                            |
| Purity/Purification                              | The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.  |
| Form/Format                                      | Liquid<br>Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.  |
| Concentration                                    | 1mg/ml (varies by lot)                                                                         |
| Sequence Length                                  | 1182                                                                                           |
| Applicable Applications for anti-KCNMA1 antibody | ELISA, IHC (Immunohistochemistry), WB (Western Blot)                                           |
| Immunogen                                        | A synthesized peptide derived from human MaxiK alpha                                           |
| Subcellular Location                             | Cell Membrane                                                                                  |
| Tissue Specificity                               | Widely expressed. Except in myocytes, it is almost ubiquitously expressed.                     |
| Predicted Cross Reactivity                       | <b>Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken</b>                                         |
| Similarity                                       | Pig (100%), Bovine (100%), Horse (100%), Sheep (92%), Rabbit (100%), Dog (100%), Chicken (92%) |
| Conjugation                                      | Unconjugated                                                                                   |
| Preparation and Storage                          | Store at -20 degree C. Stable for 12 months from date of receipt.                              |



**WB (Western Blot)**  
Western blot analysis of MaxiK alpha using K562 whole cell lysates



**IHC (Immunohistochemistry)**  
AAA327529 at 1/100 staining human lung carcinoma tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



**WB (Western Blot)**  
Western blot analysis of extracts from Mouse Myeloma cell, using MaxiK alpha Antibody. Lane 1 was treated with the blocking peptide.

ADDITIONAL INFORMATION

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for anti-KCNMA1 antibody | <p>Function: Potassium channel activated by both membrane depolarization or increase in cytosolic Ca2+ that mediates export of K+. It is also activated by the concentration of cytosolic Mg2+. Its activation dampens the excitatory events that elevate the cytosolic Ca2+ 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 Ca2+, 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). Subunit Structure: Homotetramer; which constitutes the calcium-activated potassium channel. Interacts with RAB11B (By similarity). Interacts with beta subunits KCNMB1, KCNMB2, KCNMB3 and KCNMB4. Interacts with gamma subunits LRRC26, LRRC38, LRRC52 and LRRC55. Beta and gamma subunits are accessory, and modulate its activity.</p> <p>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.</p> <p>Similarity: 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 Ca2+ and Mg2+ (By similarity). The calcium bowl constitutes one of the Ca2+ sensors and probably acts as a Ca2+-binding site. There are however other Ca2+ 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. Belongs to the potassium channel family. Calcium-activated (TC 1.A.1.3) subfamily. KCa1.1/KCNMA1 sub-subfamily.</p> |
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NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 62388890                                                                                       |
| NCBI GeneID                      | 3778                                                                                           |
| NCBI Accession #                 | NP_001014797.1                                                                                 |
| NCBI GenBank Nucleotide #        | NM_001014797.2                                                                                 |
| UniProt Accession #              | Q12791; Q12886; Q12917; Q12921; Q12960; Q13150; Q5JQ23; Q5SQR9; Q96LG8; Q9UBB0; Q9UCX0; F8WA96 |
| Molecular Weight                 | Observed: 137 kDa<br>Predicted: 138 kDa                                                        |
| NCBI Official Full Name          | calcium-activated potassium channel subunit alpha-1 isoform a                                  |
| NCBI Official Synonym Full Names | potassium calcium-activated channel subfamily M alpha 1                                        |
| NCBI Official Symbol             | KCNMA1                                                                                         |
| NCBI Official Synonym Symbols    | SLO; BKTM; SLO1; hSlo; MaxiK; PNKD3; SAKCA; mSLO1; CADEDS; KCa1.1; SLO-ALPHA; bA205K10.1       |
| NCBI Protein Information         | calcium-activated potassium channel subunit alpha-1; uncharacterized protein                   |
| UniProt Protein Name             | Calcium-activated potassium channel subunit alpha-1                                            |
| UniProt Gene Name                | KCNMA1                                                                                         |
| UniProt Synonym Gene Names       | KCNMA; SLO; MaxiK; Slo homolog; hSlo                                                           |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

