

KCNMA1 Antibody (N-Term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21822a**Specification**

KCNMA1 Antibody (N-Term) - Product Information

Application	WB,E
Primary Accession	Q12791
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	137560

KCNMA1 Antibody (N-Term) - 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, KCa11, Maxi K channel, MaxiK, Slo-alpha, Slo1, Slowpoke homolog, Slo homolog, hSlo, KCNMA1, KCNMA, SLO

Target/Specificity

This KCNMA1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 118-152 amino acids from human KCNMA1.

Dilution

WB~~1:500

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

KCNMA1 Antibody (N-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

KCNMA1 Antibody (N-Term) - Protein Information**Name** KCNMA1 ([HGNC:6284](#))**Synonyms** KCNMA, SLO

Function Potassium channel activated by both membrane depolarization or increase in cytosolic $\text{Ca}(2+)$ that mediates export of $\text{K}(+)$ (PubMed:[14523450](#), PubMed:[29330545](#), PubMed:[31152168](#)). It is also activated by the concentration of cytosolic $\text{Mg}(2+)$. Its activation dampens the excitatory events that elevate the cytosolic $\text{Ca}(2+)$ 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 $\text{Ca}(2+)$, 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 $\text{Ca}(2+)$ and reduced synaptic transmission (PubMed:[32958651](#)).

Cellular Location

Cell membrane; Multi-pass membrane protein

Tissue Location

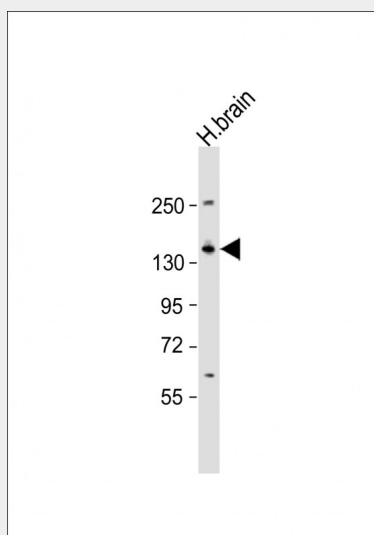
Widely expressed. Except in myocytes, it is almost ubiquitously expressed.

KCNMA1 Antibody (N-Term) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KCNMA1 Antibody (N-Term) - Images



Anti-KCNMA1 Antibody (N-Term) at 1:500 dilution + human brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 138 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

KCNMA1 Antibody (N-Term) - Background

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).

KCNMA1 Antibody (N-Term) - References

Dworetzky S.I., et al. Brain Res. Mol. Brain Res. 27:189-193(1994).
McCobb D.P., et al. Am. J. Physiol. 269:H767-H777(1995).
Deloukas P., et al. Nature 429:375-381(2004).
Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Tseng-Crank J., et al. Neuron 13:1315-1330(1994).