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Rabbit Anti-KCNMA1/BK channel antibody

SL0868R

Product Name	KCNMA1/BK channel
Chinese Name	钙激活钾 Channel protein α 1 抗体
Alias	Maxi Potassium channel alpha; bA205K10.1; BK channel; BKCa channels; BKCA alpha; BKCA alpha subunit; BKTM; Calcium activated potassium channel subfamily M subunit alpha 1; Calcium activated potassium channel subunit alpha 1; DKFZp686K1437; Drosophila slowpoke like; hSlo; K(VCA)alpha; KCa1.1; KCNMA 1; KCNMA; KCNMA1; Large conductance calcium activated potassium channel subfamily M alpha member 1; Maxi K; Maxi K channel; MaxiK; Potassium large conductance calcium activated channel subfamily M alpha member 1; SAKCA; Slo 1; SLO alpha; SLO; Slo homolog; Slo1; Slowpoke homolog; Stretch activated Kca channel; KCMA1_HUMAN.
Research Area	Channel protein
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Rat, (predicted: Mouse, Dog, Pig, Cow, Horse, Rabbit, Sheep,)
Applications	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	137kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human BK channel: 1151-1236/1236 <Cytoplasmic>
Lsotype	IgG
Purification	affinity purified by Protein A

Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 ℃ for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

Product Detail

MaxiK channels are large conductance, voltage and calcium-sensitive potassium channels which are fundamental to the control of smooth muscle tone and neuronal excitability. MaxiK channels can be formed by 2 subunits: the pore-forming alpha subunit, which is the product of this gene, and the modulatory beta subunit. Intracellular calcium regulates the physical association between the alpha and beta subunits. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008].

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).

Subunit:
Homotetramer.

Subcellular Location:
Membrane; Multi-pass membrane protein.

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

Post-translational modifications:
Phosphorylated (Probable). Phosphorylation by kinases such as PKA and/or PKG. In smooth muscles, phosphorylation affects its activity.

DISEASE:
Defects in KCNMA1 are the cause of generalized epilepsy and paroxysmal dyskinesia (GEPD) [MIM:609446]. Epilepsy is one of the most common and debilitating neurological disorders. Paroxysmal dyskinesias are neurological disorders characterized by sudden, unpredictable, disabling attacks of involuntary movement often requiring life-long treatment. The coexistence of epilepsy and paroxysmal dyskinesia in the same individual or family is an increasingly recognized phenomenon. Patients manifest absence seizures, generalized tonic-clonic seizures, paroxysmal nonkinesigenic dyskinesia, involuntary dystonic or choreiform movements. Onset is usually in childhood and patients may have seizures only, dyskinesia only, or both.

Similarity:
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.

SWISS:
Q12791

Gene ID:
3778

Database links:

Entrez Gene: 3778 Human

Entrez Gene: 16531 Mouse

Entrez Gene: 83731 Rat

Omim: 600150 Human

SwissProt: Q12791 Human

SwissProt: Q08460 Mouse

SwissProt: Q62976 Rat

Unigene: 144795 Human

Unigene: 343607 Mouse

Unigene: 486347 Mouse

Unigene: 30616 Rat

Channel protein（Channel Protein）

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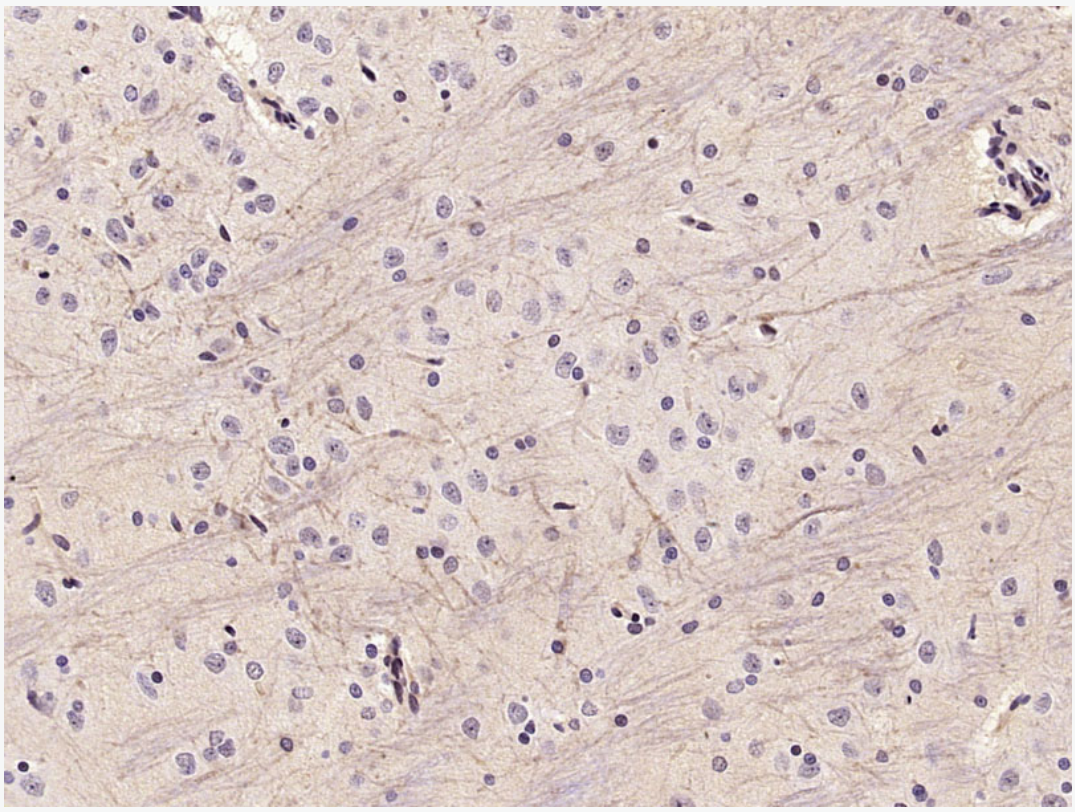
Product Picture



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by microwave in sodium citrate buffer (pH6.0) ; Block endogenous peroxidase by 3% hydrogen peroxide for 30 minutes; Blocking buffer (3% BSA) at RT for 30min; Antibody incubation with (KCNMA1/BK channel) Polyclonal Antibody, Unconjugated (SL0868R) at 1:400 overnight at 4℃, followed by conjugation to the secondary antibody (labeled with HRP)and DAB staining.