



Rabbit Anti-KCNMA1/BK channel antibody

SL4775R

Product Name:	KCNMA1/BK channel
Chinese Name:	钙激活钾Channel protein α 1抗体
Alias:	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.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Pig,Cow,Rabbit,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	137kDa
Cellular localization:	The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human BKCA alpha:21-120/1236<Extracellular>
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
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:

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.

Subcellular Location:

Membrane.

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: 374065](#) Chicken

[Entrez Gene: 282573](#) Cow

[Entrez Gene: 403984](#) Dog

[Entrez Gene: 3778](#) Human

[Entrez Gene: 16531](#) Mouse

[Entrez Gene: 83731](#) Rat

[Omim: 600150](#) Human

[SwissProt: Q8AYS8](#) Chicken

[SwissProt: Q28204](#) Cow

[SwissProt: Q28265](#) Dog

[SwissProt: Q12791](#) Human

[SwissProt: Q08460](#) Mouse

[SwissProt: Q9BG98](#) Rabbit

[SwissProt: Q62976](#) Rat

[Unigene: 144795](#) Human

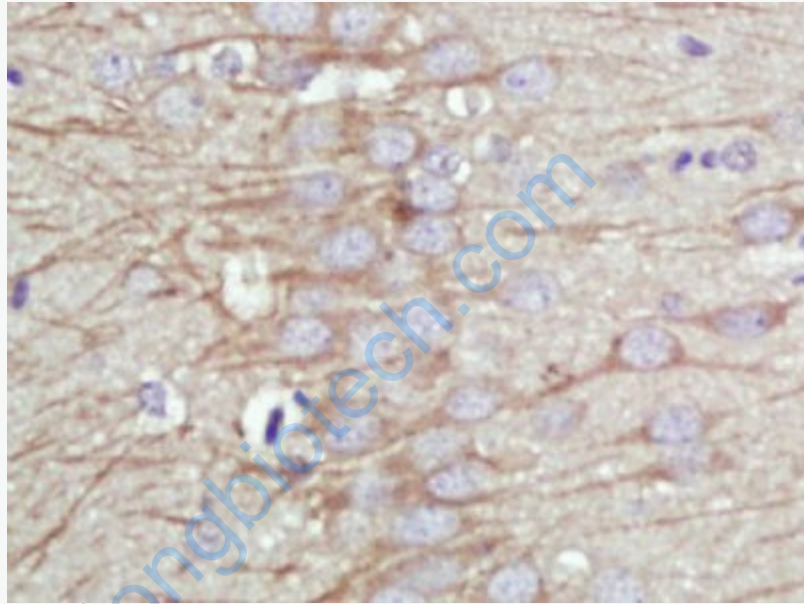
[Unigene: 343607](#) Mouse

[Unigene: 486347](#) Mouse

[Unigene: 30616](#) Rat

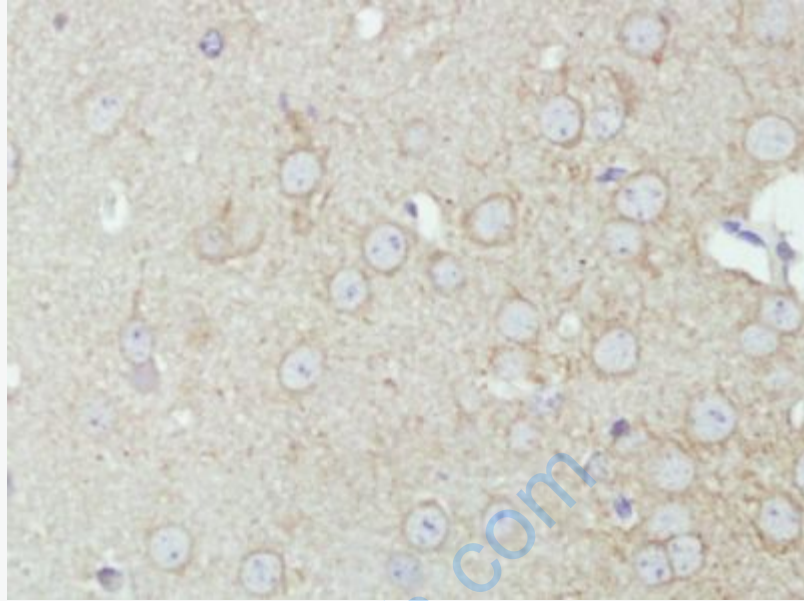
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.



Picture:

Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (KCNMA1 BK channel) Polyclonal Antibody, Unconjugated (SL4775R) at 1:400 overnight at 4°C, followed by a conjugated secondary antibody (sp-0023) for 20 minutes and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (KCNMA1 BK channel) Polyclonal Antibody, Unconjugated (SL4775R) at 1:400 overnight at 4°C, followed by a conjugated secondary antibody (sp-0023) for 20 minutes and DAB staining.