

产品名称: MaxiK α Rabbit Polyclonal Antibody

产品货号: APRab13674

产品概述 (Summary)

描述(Description)	Rabbit polyclonal Antibody
宿主(Host)	Rabbit
应用(Application)	WB,IHC,ICC/IF,ELISA
种属反应(Reactivity)	Human,Mouse,Rat
偶联物(Conjugation)	Unconjugated
修饰(Modification)	Unmodified
同种型(Isotype)	IgG
克隆(Clonality)	Polyclonal
剂型(Form)	Liquid
保存条件(Storage)	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
储存溶液(Buffer)	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
纯化 (Purification)	Affinity purification

产品应用(Application)

稀释比(Dilution Ratio)	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:20000-1:40000
分子量(Molecular Weight)	137kDa

抗原信息(Antigen Information)

基因名(Gene Name)	KCNMA1 KCNMA1; KCNMA; SLO; Calcium-activated potassium channel subunit alpha-1; BK channel;
别名(Alternative Names)	BKCA alpha; Calcium-activated potassium channel; subfamily M subunit alpha-1; K(VCA)alpha; KCa1.1; Maxi K channel; MaxiK; Slo-alpha; Slo1; Slowpoke homolog
基因 ID(Gene ID)	3778.0
SwissProt ID	Q12791
免疫原(Immunogen)	The antiserum was produced against synthesized peptide derived from human MaxiKalpha. AA range:721-770

研究背景 (Background)

potassium calcium-activated channel subfamily M alpha 1 (KCNMA1) Homo sapiens 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], alternative products: May be partially controlled by hormonal stress. Additional isoforms seem to exist, 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., domain: The calcium bowl constitutes one of the $\text{Ca}(2+)$ sensors and probably acts as a $\text{Ca}(2+)$ -binding site. There are however other $\text{Ca}(2+)$ sensors regions required for activation of the channel., domain: The heme-binding motif mediates inhibition of channel activation by heme. Carbon monoxide-bound heme leads to increased channel activation., domain: 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., domain: The RCK N-terminal domain mediates the homotetramerization, thereby promoting the assembly of monomers into functional potassium channel. It includes binding sites for $\text{Ca}(2+)$ and $\text{Mg}(2+)$., domain: The S0 segment is essential for the modulation by the accessory beta subunits KCNMB1, KCNMB2, KCNMB3 and KCNMB4., domain: The S4 segment, which is characterized by a series of positively charged amino acids at every third position, is part of the voltage-sensor., enzyme regulation: Ethanol and carbon monoxide-bound heme increase channel activation. Heme inhibits channel activation., function: Potassium channel activated by both membrane depolarization or increase in cytosolic $\text{Ca}(2+)$ that mediates export of $\text{K}(+)$. 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), miscellaneous: The protein was initially thought to contain two functionally distinct parts: The core channel (from the N-terminus to the S9 segment) that mediates the channel activity, and the cytoplasmic tail (from the S9 segment to the C-terminus) that mediates the calcium sensing. The situation is however more complex, since the core channel also contains binding sites for $\text{Ca}(2+)$ and $\text{Mg}(2+)$., PTM: Phosphorylated (Probable). Phosphorylation by kinases such as PKA and/or PKG. In smooth muscles, phosphorylation affects its activity., sequence caution: Contaminating sequence. Sequence of unknown origin in the N-terminal part., similarity: Belongs to

the potassium channel family. Calcium-activated subfamily, similarity: Contains 1 RCK N-terminal domain, subunit: Homotetramer; which constitutes the calcium-activated potassium channel. Interacts with beta subunits KCNMB1, KCNMB2, KCNMB3 and KCNMB4. Beta subunits are accessory, and modulate its activity, tissue specificity: Widely expressed. Except in myocytes, it is almost ubiquitously expressed.

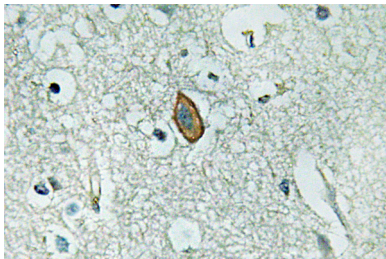
研究领域 (Research Area)

Vascular smooth muscle contraction;

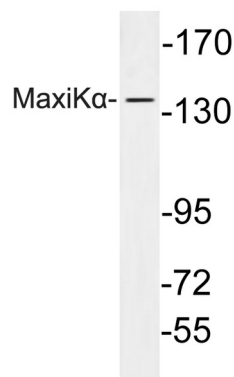
注意事项 (Note)

For research use only.

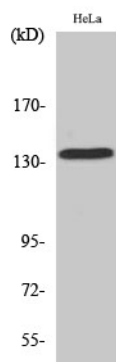
图片 (Image Data)



Immunohistochemistry analysis of MaxiK α antibody in paraffin-embedded human brain tissue.



Western blot analysis of lysate from HeLa cells, using MaxiK α antibody.



Western Blot analysis of various cells using MaxiK α Polyclonal Antibody

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产品类别	产品货号	产品名称
WB 解决方案	RA10020	2h 极速 WB 即用型全流程试剂盒
	RA10021	4h 快速 WB 即用型全流程试剂盒
	RA10042	5h 畅享版 WB 全流程试剂盒
	RA10037	校准级彩色预染蛋白 Marker (8-180kDa)
	RA10038	校准级彩色预染蛋白 Marker (10-250kDa)
	RA10039	校准级高分子彩色预染蛋白 Marker (25-400kDa)
TSA 多重荧光染色试剂盒	RA10008	TSA 双标三色多重荧光染色试剂盒 (mIHC)
	RA10009	TSA 三标四色多重荧光染色试剂盒 (mIHC)
	RA10010	TSA 四标五色多重荧光染色试剂盒 (mIHC)
	RA10011	TSA 五标六色多重荧光染色试剂盒 (mIHC)
	RA10012	TSA 六标七色多重荧光染色试剂盒 (mIHC)
IHC 检测试剂盒	RA10006	HRP Anti-Mouse/Rabbit IHC Detection System
	RA10007	Polymer-HRP Anti-Mouse/Rabbit IHC Detection System
抗体标记试剂盒	RE80004p	辣根过氧化物酶(HRP)抗体标记试剂盒
	RE80002q	Sulfo-NHS-生物素标记试剂盒
	RE80007p	Cy3 荧光素标记试剂盒
	RE80011p	Fluor488 荧光素标记试剂盒
	RE80017p	Fluor750 荧光素标记试剂盒
	RE80005p	藻红蛋白(R-PE) 抗体快速标记试剂盒
	RE80040	PE-Cy7 串联染料抗体快速标记试剂盒
稳转细胞系构建服务 (免费赠送全膜 WB 验证)	TS-0001	过表达稳转细胞系构建
	TS-0002	敲低稳转细胞系构建
	TS-0003	敲除细胞系构建

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