SunLong Biotech Co.,LTD
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[Primary Antibody]

Rabbit Anti-ERG/KCNH2 antibody

Catalog Number: SL23704R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	ERG/KCNH2
Immunogen:	KLH conjugated synthetic peptide derived from human ERG/KCNH2: 541-640/1159 <Extracellular>
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
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.
Reactivity:	Mouse(predicted:Human,Rat,Dog,Cow,Horse,Sheep)
Predicted MW.:	127kDa
Subcellular Location:	The cell membrane
Background:	The potassium voltage gated channel, subfamily H (eag related), member 2 (KCNH2) gene encodes a voltage-gated potassium channel which has an important role in cardiac action potential repolarization in the mammalian heart. Mutations in KCNH2 have been shown to cause chromosome 7-linked congenital long QT syndrome, a disorder associated with delayed cardiac repolarization, prolonged electrocardiographic QT intervals, and the development of ventricular arrhythmias. KCNH2 channels are an important target for many drugs, and have emerged as a significant type of cardiac ion channel.Highly expressed in heart and brain. **Function:** Pore-forming (alpha) subunit of voltage-gated inwardly rectifying potassium channel. Channel properties are modulated by cAMP and subunit assembly. Mediates the rapidly activating component of the delayed rectifying

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	potassium current in heart (IKr). Isoform 3 has no channel activity by itself, but modulates channel characteristics when associated with isoform 1. **Subunit:** The potassium channel is probably composed of a homo- or heterotetrameric complex of pore-forming alpha subunits that can associate with modulating beta subunits. Heteromultimer with KCNH6/ERG2 and KCNH7/ERG3. Interacts with ALG10B (By similarity). Heteromultimer with KCNE1 and KCNE2. **Subcellular Location:** Membrane; Multi-pass membrane protein. **Tissue Specificity:** Highly expressed in heart and brain. **Post-translational modifications:** Phosphorylated on serine and threonine residues. Phosphorylation by PKA inhibits ion conduction. DISEASE: Defects in KCNH2 are the cause of long QT syndrome type 2 (LQT2) [MIM:613688]. Long QT syndromes are heart disorders characterized by a prolonged QT interval on the ECG and polymorphic ventricular arrhythmias. They cause syncope and sudden death in response to exercise or emotional stress. Deafness is often associated with LQT2. Defects in KCNH2 are the cause of short QT syndrome type 1 (SQT1) [MIM:609620]. Short QT syndromes are heart disorders characterized by idiopathic persistently and uniformly short QT interval on ECG in the absence of structural heart disease in affected individuals. They cause syncope and sudden death. **Similarity:** Belongs to the potassium channel family. H (Eag) (TC1.A.1.20) subfamily. Kv11.1/KCNH2 sub-subfamily. Contains 1 cyclic nucleotide-binding domain. Contains 1 PAC (PAS-associated C-terminal) domain. Contains 1 PAS (PER-ARNT-SIM) domain. **Database links:** **Entrez Gene:** 3757 Human **Entrez Gene:** 16511 Mouse **Entrez Gene:** 117018 Rat Omim: 152427 Human **SwissProt:** Q12809 Human **SwissProt:** O35219 Mouse **SwissProt:** O08962 Rat **Unigene:** 647099 Human **Unigene:** 6539 Mouse **Unigene:** 10970 Rat

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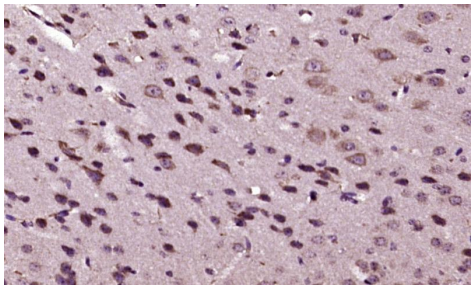
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[VALIDATION IMAGES]



Paraformaldehyde-fixed, paraffin embedded (mouse brain tissue); 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 (ERG) Polyclonal Antibody, Unconjugated (SL23704R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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