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KCNQ5 Rabbit pAb

Catalog # AP99897

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9NR82
Other Accession	Q9NR82
Predicted	Rat, Pig, Human, Mouse, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	102179
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human KCNQ5
Epitope Specificity	851-932/932
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the potassium channel family. KQT (TC 1.A.1.15) subfamily. Kv7.5/KCNQ5 sub-subfamily.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene is a member of the KCNQ potassium channel gene family that is differentially expressed in subregions of the brain and in skeletal muscle. The protein encoded by this gene yields currents that activate slowly with depolarization and can form heteromeric channels with the protein encoded by the KCNQ3 gene. Currents expressed from this protein have voltage dependences and inhibitor sensitivities in common with M-currents. They are also inhibited by M1 muscarinic receptor activation. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2009]

Additional Information

Gene ID	56479
Other Names	Kv7.5; MRD46; 7730402H11; 9230107O05Rik; D1Mgi1; Kcnq5l; KCNQ5_HUMAN; KCNQ5; KQT-like 5; Potassium channel subunit alpha KvLQT5; Voltage-gated potassium channel subunit Kv7.5; KCNQ5_MOUSE; potassium voltage-gated channel subfamily Q member 5; potassium voltage-gated channel, KQT-like subfamily, member 5; potassium channel, voltage gated KQT-like subfamily Q, member 5
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. 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.

Protein Information

Name	KCNQ5 (HGNC:6299)
Function	Pore-forming subunit of the voltage-gated potassium (Kv) channel broadly expressed in brain and involved in the regulation of neuronal excitability (PubMed:10787416, PubMed:10816588, PubMed:11159685, PubMed:28669405). Associates with KCNQ3/Kv7.3 pore- forming subunit to form a potassium channel which contributes to M-type current, a slowly activating and deactivating potassium conductance which plays a critical role in determining the subthreshold electrical excitability of neurons (PubMed:10816588, PubMed:11159685). Contributes, with other potassium channels, to the molecular diversity of a heterogeneous population of M-channels, varying in kinetic and pharmacological properties, which underlie this physiologically important current (PubMed:10816588). Also forms a functional channel with KCNQ1/Kv7.1 subunit that may contribute to vasoconstriction and hypertension (PubMed:24855057). Channel may be selectively permeable in vitro to other cations besides potassium, in decreasing order of affinity K(+) = Rb(+) > Cs(+) > Na(+) (PubMed:10816588). Similar to the native M-channel, KCNQ3-KCNQ5 potassium channel is suppressed by activation of the muscarinic acetylcholine receptor CHRM1 (PubMed:10816588).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Strongly expressed in brain and skeletal muscle (PubMed:10787416, PubMed:10816588). In brain, expressed in cerebral cortex, occipital pole, frontal lobe and temporal lobe. Lower levels in hippocampus and putamen. Low to undetectable levels in medulla, cerebellum and thalamus (PubMed:10787416, PubMed:10816588)

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