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KCNE2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19267b

Product Information

Application	WB, E
Primary Accession	Q9Y6J6
Other Accession	NP_751951.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB30601
Calculated MW	14472
Antigen Region	79-107

Additional Information

Gene ID	9992
Other Names	Potassium voltage-gated channel subfamily E member 2, MinK-related peptide 1, Minimum potassium ion channel-related peptide 1, Potassium channel subunit beta MiRP1, KCNE2
Target/Specificity	This KCNE2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 79-107 amino acids from the C-terminal region of human KCNE2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	KCNE2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KCNE2 (HGNC:6242)
Function	Ancillary protein that functions as a regulatory subunit of the voltage-gated potassium (Kv) channel complex composed of pore- forming and

	potassium-conducting alpha subunits and of regulatory beta subunits (PubMed:10219239, PubMed:11034315, PubMed:11101505, PubMed:12185453, PubMed:20533308). KCNE2 beta subunit modulates the gating kinetics and enhances stability of the channel complex (PubMed:10219239, PubMed:11034315, PubMed:11101505, PubMed:12185453, PubMed:20533308). Alters the gating of the delayed rectifier Kv channel containing KCNB1 alpha subunit (PubMed:11101505, PubMed:20533308). Associates with KCNH2/HERG alpha subunit Kv channel to form the rapidly activating component of the delayed rectifying potassium current (IKr) in heart (PubMed:10219239, PubMed:12185453). May associate with KCNQ2 and/or KCNQ3 alpha subunits to modulate the native M-type current (PubMed:11034315). May associate with HCN1 and HCN2 channel subunits to increase potassium current (By similarity). Forms a heterooligomer complex with KCNQ1/KVLQT1 alpha subunits which leads to currents with an apparently instantaneous activation, a rapid deactivation process and a linear current-voltage relationship and decreases the amplitude of the outward current (PubMed:11101505). KCNQ1-KCNE2 channel associates with Na(+)-coupled myo-inositol symporter in the apical membrane of choroid plexus epithelium and regulates the myo-inositol gradient between blood and cerebrospinal fluid with an impact on neuron excitability (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein {ECO:0000250|UniProtKB:P63161} Apical cell membrane {ECO:0000250|UniProtKB:Q9D808}; Single-pass membrane protein. Note=Colocalizes with KCNB1 at the plasma membrane. {ECO:0000250|UniProtKB:P63161}
Tissue Location	Highly expressed in brain, heart, skeletal muscle, pancreas, placenta, kidney, colon and thymus. A small but significant expression is found in liver, ovary, testis, prostate, small intestine and leukocytes. Very low expression, nearly undetectable, in lung and spleen.

Background

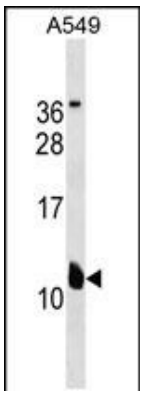
Voltage-gated potassium (Kv) channels represent the most complex class of voltage-gated ion channels from both functional and structural standpoints. Their diverse functions include regulating neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle contraction, and cell volume. This gene encodes a member of the potassium channel, voltage-gated, isk-related subfamily. This member is a small integral membrane subunit that assembles with the KCNH2 gene product, a pore-forming protein, to alter its function. This gene is expressed in heart and muscle and the gene mutations are associated with cardiac arrhythmia.

References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Albert, C.M., et al. Circ Arrhythm Electrophysiol 3(3):222-229(2010)
Subbiah, R.N., et al. Can J Cardiol 26(4):208-212(2010)
Tam, G.W., et al. Biochem. Soc. Trans. 38(2):445-451(2010)
Roepke, T.K., et al. PLoS ONE 5 (7), E11451 (2010) :

Images

KCNE2 Antibody (C-term)(Cat. #AP19267b) western blot analysis in A549 cell line lysates (35ug/lane).This demonstrates the KCNE2 antibody detected the KCNE2



protein (arrow).