10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KCNB2 Antibody(N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19554a

Product Information

Application	WB, E
Primary Accession	Q92953
Other Accession	Q95L11, A6H8H5, Q4ZHA6, NP_004761.2
Reactivity	Human
Predicted	Bovine, Mouse, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB40837
Calculated MW	102563
Antigen Region	138-166

Additional Information

Gene ID	9312
Other Names	Potassium voltage-gated channel subfamily B member 2, Voltage-gated potassium channel subunit Kv22, KCNB2
Target/Specificity	This KCNB2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 138-166 amino acids from the N-terminal region of human KCNB2.
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	KCNB2 Antibody(N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KCNB2 (HGNC:6232)
Function	Voltage-gated potassium channel that mediates transmembrane potassium transport in excitable membranes, primarily in the brain and smooth muscle

cells. Channels open or close in response to the voltage difference across the membrane, letting potassium ions pass in accordance with their electrochemical gradient. Homotetrameric channels mediate a delayed-rectifier voltage-dependent outward potassium current that display rapid activation and slow inactivation in response to membrane depolarization. Can form functional homotetrameric and heterotetrameric channels that contain variable proportions of KCNB1; channel properties depend on the type of alpha subunits that are part of the channel. Can also form functional heterotetrameric channels with other alpha subunits that are non-conducting when expressed alone, such as KCNS1 and KCNS2, creating a functionally diverse range of channel complexes. In vivo, membranes probably contain a mixture of heteromeric potassium channel complexes, making it difficult to assign currents observed in intact tissues to any particular potassium channel family member. Contributes to the delayed-rectifier voltage-gated potassium current in cortical pyramidal neurons and smooth muscle cells.

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:Q63099}; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q63099}. Perikaryon {ECO:0000250|UniProtKB:Q63099}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q63099}. Note=Localized uniformly throughout cell bodies and dendrites. Colocalizes with KCNB1 to high-density somatodendritic clusters on cortical pyramidal neurons {ECO:0000250|UniProtKB:Q63099}

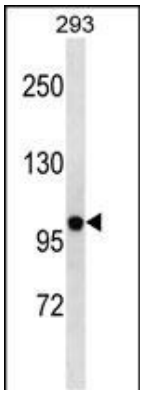
Background

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. Four sequence-related potassium channel genes - shaker, shaw, shab, and shal - have been identified in Drosophila, and each has been shown to have human homolog(s). This gene encodes a member of the potassium channel, voltage-gated, shab-related subfamily. This member is a delayed rectifier potassium channel. The gene is expressed in gastrointestinal smooth muscle cells.

References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Cirulli, E.T., et al. Eur. J. Hum. Genet. 18(7):815-820(2010)
Baranzini, S.E., et al. Hum. Mol. Genet. 18(4):767-778(2009)
Nyholt, D.R., et al. Hum. Mol. Genet. 17(21):3318-3331(2008)
Wu, C., et al. Proteomics 7(11):1775-1785(2007)

Images



KCNB2 Antibody (N-term) (Cat. #AP19554a) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the KCNB2 antibody detected the KCNB2 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.