

Kv beta 2 Rabbit pAb

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Catalog # AP54764

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q13303
Reactivity	Rat
Predicted	Pig, Dog, Human, Mouse, Rabbit, Zebrafish, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	41000
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human KCNA2B/Kv beta 2
Epitope Specificity	251-350/367
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasmic
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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, shaker-related subfamily. This member is one of the beta subunits, which are auxiliary proteins associating with functional Kv-alpha subunits. This member alters functional properties of the KCNA4 gene product. Alternative splicing of this gene results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Dec 2010]

Additional Information

Gene ID	8514
Other Names	Voltage-gated potassium channel subunit beta-2, 1.1.1.-, K(+) channel subunit beta-2, Kv-beta-2, hKvbeta2, KCNAB2 (HGNC:6229), KCNA2B, KCNK2
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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

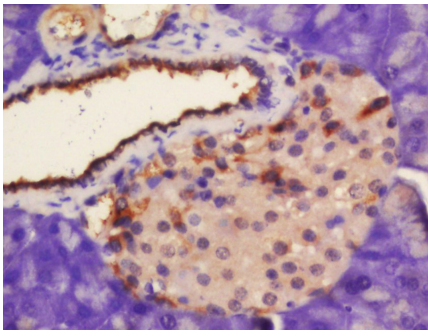
Name	KCNAB2 (HGNC:6229)
Synonyms	KCNA2B, KCNK2
Function	Regulatory subunit of the voltage-gated potassium (Kv) Shaker channels composed of pore-forming and potassium-conducting alpha subunits and of regulatory beta subunits (PubMed: 11825900 , PubMed: 7649300). The beta-2/KCNAB2 cytoplasmic subunit promotes potassium channel closure via a mechanism that does not involve physical obstruction of the channel pore (PubMed: 11825900 , PubMed: 7649300). Promotes the inactivation of Kv1.4/KCNA4 and Kv1.5/KCNA5 alpha subunit-containing channels (PubMed: 11825900 , PubMed: 7649300). Displays nicotinamide adenine dinucleotide phosphate (NADPH)-dependent aldoketoreductase activity by catalyzing the NADPH- dependent reduction of a wide range of aldehyde and ketone substrates (By similarity). Substrate specificity includes methylglyoxal, 9,10- phenanthrenequinone, prostaglandin J2, 4-nitrobenzaldehyde, 4-nitroacetophenone and 4-oxo-trans-2-nonenal (in vitro, no physiological substrate identified yet) (By similarity). The binding of oxidized and reduced nucleotide alters Kv channel gating and may contribute to dynamic fine tuning of cell excitability (By similarity). Contributes to the regulation of nerve signaling, and prevents neuronal hyperexcitability (By similarity).
Cellular Location	Cytoplasm {ECO:0000250 UniProtKB:P62483}. Membrane; Peripheral membrane protein; Cytoplasmic side. Cell membrane {ECO:0000250 UniProtKB:P62483}; Peripheral membrane protein; Cytoplasmic side. Cell projection, axon. Synapse, synaptosome. Cytoplasm, cytoskeleton {ECO:0000250 UniProtKB:P62483}. Note=Recruited to the cytoplasmic side of the cell membrane via its interaction with pore-forming potassium channel alpha subunits. Associates with microtubules when unphosphorylated. {ECO:0000250 UniProtKB:P62483}
Tissue Location	Detected in myelinated nerve fibers in the spinal cord, in the juxtaparanodal region of the nodes of Ranvier, but also in the paranodal region (PubMed:11086297). Detected in hippocampus (at protein level) (PubMed:21357749). Detected in hippocampus (PubMed:7649300).

Background

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Images

Tissue/cell: rat pancreas tissue; 4%
Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling
bathing for 15min; Block endogenous peroxidase by 3%
Hydrogen peroxide for 30min; Blocking buffer (normal
goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-Kv beta 2 Polyclonal Antibody,
Unconjugated(AP54764) 1:200, overnight at 4°C, followed



by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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