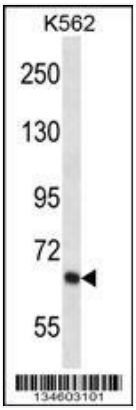
KCND2 Antibody – Rabbit Polyclonal

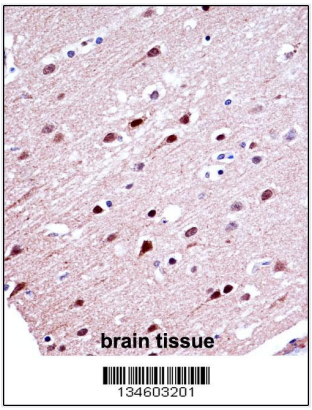
PRODUCT OVERVIEW

Product Name	KCND2, Polyclonal Antibody
Full Product Name	KCND2, NT (KCND2, KIAA1044, Potassium voltage-gated channel subfamily D member 2, Voltage-gated potassium channel subunit Kv4.2) (Biotin)
Product Gene Name	anti-KCND2 antibody
Product Synonym Names	KCND2; KIAA1044; Potassium voltage-gated channel subfamily D member 2; Voltage-gated potassium channel subunit Kv4.2
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Biotin.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	70,537 Da
OMIM	605410
3D Structure	ModBase 3D Structure for Q9NZV8
Immunogen	KCND2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 122-151 amino acids from the N-terminal region of human KCND2.
Conjugate	Biotin
Note	Preservative Free
Product Categories/Family for anti-KCND2 antibody	Antibodies; KIAA; orf
Applications Tested/Suitable for anti-KCND2 antibody	Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB)
Application Notes for anti-KCND2 antibody	IHC: 1:10-50 ELISA: 1:1,000 WB: 1:100-500 Applications are based on unconjugated antibody.
Related Product Information for anti-KCND2 antibody	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, shal-related subfamily, members of which form voltage-activated A-type potassium ion channels and are prominent in the repolarization phase of the action potential. This member mediates a rapidly inactivating, A-type outward potassium current which is not under the control of the N terminus as it is in Shaker channels.

Product References and Citations for anti-KCND2 antibody	Foeger, N.C., et al. J. Biol. Chem. 285(43):33413-33422(2010). Levy, D.I., et al. J. Physiol. (Lond.) 588 (PT 14), 2657-2668 (2010): Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010): Aronica, E., et al. Neurobiol. Dis. 36(1):81-95(2009). Tayo, B.O., et al. Circ Cardiovasc Genet 2(1):38-45(2009).
Other Notes	Small volumes of anti-KCND2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for KCND2 purchase	MBS6312359 is an antibody targeting KCND2. Also known as KCND2, NT (KCND2, KIAA1044, Potassium voltage-gated channel subfamily D member 2, Voltage-gated potassium channel subunit Kv4.2) (Biotin). Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-KCND2 antibody
KCND2 Antibody (N-term) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the KCND2 antibody detected the KCND2 protein (arrow).



Immunohistochemistry (IHC) of anti-KCND2 antibody
KCND2 Antibody (N-term) (AP14832a)immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of KCND2 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for KCND2. It may not necessarily be applicable to this product.

NCBI GI #	9789987
NCBI GeneID	3751
NCBI Accession #	NP_036413.1
UniProt Primary Accession #	Q9NZV8
UniProt Secondary Accession #	O95012; O95021; Q2TBD3; Q9UBY7; Q9UN98; Q9UNH9
UniProt Related Accession #	Q9NZV8
GenBank Nucleotide #	NM_012281.2
NCBI Official Full Name	potassium voltage-gated channel subfamily D member 2
NCBI Official Synonym Full Names	potassium voltage-gated channel, Shal-related subfamily, member 2
NCBI Official Symbol	KCND2
NCBI Official Synonym Symbols	RK5; KV4.2
UniProt Protein Name	Potassium voltage-gated channel subfamily D member 2
UniProt Synonym Protein Names	Voltage-gated potassium channel subunit Kv4.2
Protein Family	Potassium voltage-gated channel subfamily
UniProt Gene Name	KCND2
UniProt Synonym Gene Names	KIAA1044

UniProt Entry Name	KCND2_HUMAN
NCBI Protein Information	potassium voltage-gated channel subfamily D member 2; voltage-sensitive potassium channel; voltage-gated potassium channel subunit Kv4.2
NCBI Summary for KCND2	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, shal-related subfamily, members of which form voltage-activated A-type potassium ion channels and are prominent in the repolarization phase of the action potential. This member mediates a rapidly inactivating, A-type outward potassium current which is not under the control of the N terminus as it is in Shaker channels. [provided by RefSeq, Jul 2008]
UniProt Comments for KCND2	Kv4.2: Pore-forming (alpha) subunit of voltage-gated rapidly inactivating A-type potassium channels. May contribute to I(To) current in heart and I(Sa) current in neurons. Channel properties are modulated by interactions with other alpha subunits and with regulatory subunits. Belongs to the potassium channel family. D (Shal) (TC 1.A.1.2) subfamily. Kv4.2/KCND2 sub-subfamily. Protein type: Membrane protein, integral; Membrane protein, multi-pass; Channel, potassium Chromosomal Location of Human Ortholog: 7q31 Cellular Component: postsynaptic membrane; voltage-gated potassium channel complex; integral to plasma membrane; integral to membrane; plasma membrane; dendritic spine; intrinsic to plasma membrane Molecular Function: protein binding; voltage-gated potassium channel activity; delayed rectifier potassium channel activity; metal ion binding; A-type (transient outward) potassium channel activity Biological Process: regulation of action potential; synaptic transmission; protein homooligomerization
Research Articles on KCND2	**1.** Subunit counting by single-molecule imaging revealed that the bound number of KChIP4 in each Kv4.2.KChIP4 complex was dependent on the expression level of KChIP4.
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