

**KCND3 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP14226a****Specification**

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**KCND3 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O9UK17</a>
Other Accession	<a href="#">O62897</a> , <a href="#">O9Z0V1</a> , <a href="#">NP_751948.1</a> , <a href="#">NP_004971.2</a>
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	73451
Antigen Region	13-41

**KCND3 Antibody (N-term) - Additional Information****Gene ID** 3752**Other Names**

Potassium voltage-gated channel subfamily D member 3, Voltage-gated potassium channel subunit Kv43, KCND3

**Target/Specificity**

This KCND3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 13-41 amino acids from the N-terminal region of human KCND3.

**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**

KCND3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**KCND3 Antibody (N-term) - Protein Information****Name** KCND3

**Function** Pore-forming (alpha) subunit of voltage-gated A-type potassium channels that mediates transmembrane potassium transport in excitable membranes, in brain and heart (PubMed:[10200233](#), PubMed:[17187064](#), PubMed:[21349352](#), PubMed:[22457051](#), PubMed:[23280837](#), PubMed:[23280838](#), PubMed:[34997220](#), PubMed:[9843794](#)). In cardiomyocytes, may generate the transient outward potassium current I(To) (By similarity). In neurons, may conduct the transient subthreshold somatodendritic A-type potassium current (ISA) (By similarity). Kinetics properties are characterized by fast activation at subthreshold membrane potentials, rapid inactivation, and quick recovery from inactivation (PubMed:[10200233](#), PubMed:[17187064](#), PubMed:[21349352](#), PubMed:[22457051](#), PubMed:[23280837](#), PubMed:[23280838](#), PubMed:[34997220](#), PubMed:[9843794](#)). Channel properties are modulated by interactions with regulatory subunits (PubMed:[17187064](#), PubMed:[34997220](#)). Interaction with the regulatory subunits KCNIP1 or KCNIP2 modulates the channel gating kinetics namely channel activation and inactivation kinetics and rate of recovery from inactivation (PubMed:[17187064](#), PubMed:[34997220](#)). Likewise, interaction with DPP6 modulates the channel gating kinetics namely channel activation and inactivation kinetics (PubMed:[34997220](#)).

#### **Cellular Location**

Cell membrane; Multi-pass membrane protein. Cell membrane, sarcolemma {ECO:0000250|UniProtKB:Q62897}; Multi-pass membrane protein. Cell projection, dendrite {ECO:0000250|UniProtKB:Q62897}. Note=Interaction with palmitoylated KCNIP2 and KCNIP3 enhances cell surface expression {ECO:0000250|UniProtKB:Q62897}

#### **Tissue Location**

Highly expressed in heart and brain, in particular in cortex, cerebellum, amygdala and caudate nucleus (PubMed:10200233, PubMed:10729221, PubMed:9843794). Detected at lower levels in liver, skeletal muscle, kidney and pancreas (PubMed:10200233, PubMed:10729221).

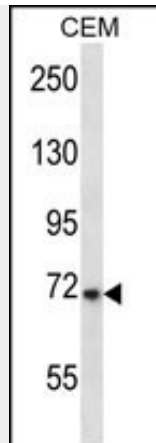
#### **KCND3 Antibody (N-term) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **KCND3 Antibody (N-term) - Images**





KCND3 Antibody (N-term) (Cat. #AP14226a) western blot analysis in CEM cell line lysates (35ug/lane). This demonstrates the KCND3 antibody detected the KCND3 protein (arrow).

### **KCND3 Antibody (N-term) - 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, 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 includes two isoforms with different sizes, which are encoded by alternatively spliced transcript variants of this gene. [provided by RefSeq].

### **KCND3 Antibody (N-term) - References**

Lundby, A., et al. *Br. J. Pharmacol.* 160(8):2028-2044(2010)  
Rose, J.E., et al. *Mol. Med.* 16 (7-8), 247-253 (2010) :  
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