

**KCND1 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP13021A**

**Specification**

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**KCND1 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O9NSA2</a>
Other Accession	<a href="#">Q03719</a> , <a href="#">Q52PG9</a> , <a href="#">NP_004970.3</a>
Reactivity	Human
Predicted	Bovine, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	71330
Antigen Region	118-147

**KCND1 Antibody (N-term) - Additional Information**

**Gene ID** 3750

**Other Names**

Potassium voltage-gated channel subfamily D member 1, Voltage-gated potassium channel subunit Kv41, KCND1

**Target/Specificity**

This KCND1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 118-147 amino acids from the N-terminal region of human KCND1.

**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**

KCND1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**KCND1 Antibody (N-term) - Protein Information**

**Name** KCND1 ([HGNC:6237](#))

**Function** A-type voltage-gated potassium channel that mediates transmembrane potassium transport in excitable membranes in the brain (PubMed:[15454437](#)). Mediates A-type current I(SA) in suprachiasmatic nucleus (SCN) neurons. Exhibits a low-threshold A-type current with a hyperpolarized steady-state inactivation midpoint and the recovery process was steeply voltage-dependent, with recovery being markedly faster at more negative potentials. May regulate repetitive firing rates in the suprachiasmatic nucleus (SCN) neurons and circadian rhythms in neuronal excitability and behavior. Contributes to the regulation of the circadian rhythm of action potential firing in suprachiasmatic nucleus neurons, which regulates the circadian rhythm of locomotor activity. The regulatory subunit KCNIP1 modulates the kinetics of channel inactivation, increases the current amplitudes and accelerates recovery from inactivation, shifts activation in a depolarizing direction (By similarity). The regulatory subunit DPP10 decreases the voltage sensitivity of the inactivation channel gating (PubMed:[15454437](#)).

#### Cellular Location

Cell membrane {ECO:0000250|UniProtKB:Q9NZV8}; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q9NZV8}

#### Tissue Location

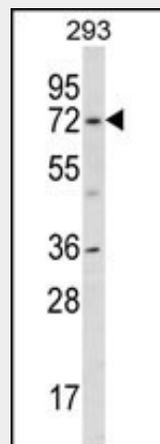
Widely expressed. Highly expressed in brain, in particular in cerebellum and thalamus; detected at lower levels in the other parts of the brain.

### KCND1 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](#)

### KCND1 Antibody (N-term) - Images



KCND1 Antibody (N-term) (Cat. #AP13021a) western blot analysis in 293 cell line lysates (35ug/lane). This demonstrates the KCND1 antibody detected the KCND1 protein (arrow).

### KCND1 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 gene is expressed at moderate levels in all tissues analyzed, with lower levels in skeletal muscle.

#### **KCND1 Antibody (N-term) - References**

- Jang, S.H., et al. *Biochem. Biophys. Res. Commun.* 384(2):180-186(2009)  
Gutman, G.A., et al. *Pharmacol. Rev.* 57(4):473-508(2005)  
Jerng, H.H., et al. *Biophys. J.* 87(4):2380-2396(2004)  
Nakamura, T.Y., et al. *FEBS Lett.* 499(3):205-209(2001)  
Isbrandt, D., et al. *Genomics* 64(2):144-154(2000)