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

Anti-KCND1 Picoband Antibody

Catalog # ABO11947

Specification

Anti-KCND1 Picoband Antibody - Product Information

Application	**WB**
Primary Accession	Q9NSA2
Host	**Rabbit**
Reactivity	**Human, Mouse**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Potassium voltage-gated channel subfamily D member 1(KCND1) detection. Tested with WB in Human;Mouse.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-KCND1 Picoband Antibody - Additional Information

Gene ID 3750

Other Names
Potassium voltage-gated channel subfamily D member 1, Voltage-gated potassium channel subunit Kv4.1, KCND1

Calculated MW
71330 MW KDa

Application Details
Western blot, 0.1-0.5 µg/ml, Human, Mouse

Subcellular Localization
Membrane; Multi-pass membrane protein. Cell projection, dendrite .

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

Protein Name
Potassium voltage-gated channel subfamily D member 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
E.coli-derived human KCND1 recombinant protein (Position: T442-L647). Human KCND1 shares 90% amino acid (aa) sequence identity with mouse KCND1.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage	**At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.**

Anti-KCND1 Picoband Antibody - 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 regulates 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.

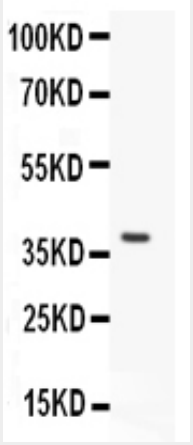
Anti-KCND1 Picoband Antibody - Protocols

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

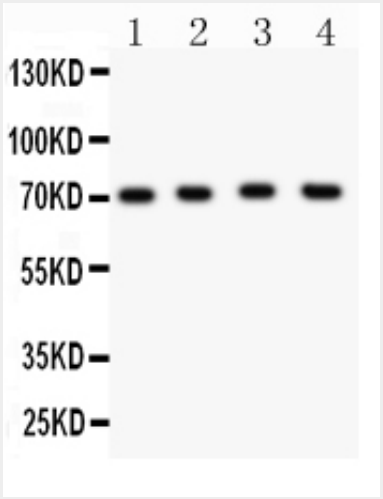
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-KCND1 Picoband Antibody - Images

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



Anti- KCND1 Picoband antibody, ABO11947, Western blottingAll lanes: Anti KCND1 (ABO11947) at 0.5ug/mlWB: Recombinant Human KCND1 Protein 0.5ngPredicted bind size: 39KDObserved bind size: 39KD



Anti- KCND1 Picoband antibody, ABO11947, Western blottingAll lanes: Anti KCND1 (ABO11947) at 0.5ug/mlLane 1: Mouse Brain Tissue Lysate at 50ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: COLO320 Whole Cell Lysate at 40ugLane 4: A549 Whole Cell Lysate at 40ugPredicted bind size: 71KDObserved bind size: 71KD

Anti-KCND1 Picoband Antibody - Background

Potassium voltage-gated channel, Shal-related subfamily, member 1 (KCND1), also known as Kv4.1, is a human gene. It is mapped to Xp11.23. KCND1 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. The diverse functions of Voltage-gated potassium (Kv) channels include regulating neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle contraction, and cell volume. In addition to that, KCND1 is expressed at moderate levels in all tissues analyzed, with lower levels in skeletal muscle.