



# Kv2.1/KCNB1 Monoclonal Antibody

<b>Catalog No</b>	BYmab-10791
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Mouse;Rat
<b>Applications</b>	WB
<b>Gene Name</b>	KCNB1
<b>Protein Name</b>	Potassium voltage-gated channel subfamily B member 1 (Delayed rectifier potassium channel 1) (DRK1) (h-DRK1) (Voltage-gated potassium channel subunit Kv2.1)
<b>Immunogen</b>	Synthesized peptide derived from human Kv2.1/KCNB1 Monoclonal
<b>Specificity</b>	This antibody detects endogenous levels of Kv2.1/KCNB1.
<b>Formulation</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source</b>	Monoclonal, Mouse,IgG
<b>Purification</b>	The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Dilution</b>	WB 1:500-2000
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	Potassium voltage-gated channel subfamily B member 1 (Delayed rectifier potassium channel 1) (DRK1) (h-DRK1) (Voltage-gated potassium channel subunit Kv2.1)
<b>Observed Band</b>	95kD
<b>Cell Pathway</b>	Cell membrane . Perikaryon . Cell projection, axon . Cell projection, dendrite . Membrane; Multi-pass membrane protein. Cell junction, synapse, postsynaptic cell membrane . Cell junction, synapse . Cell junction, synapse, synaptosome . Lateral cell membrane . Cell membrane, sarcolemma . Localizes to high-density somatodendritic clusters and non-clustered sites on the surface of neocortical and hippocampal pyramidal neurons in a cortical actin cytoskeleton-dependent manner (PubMed:24477962). Localizes also to high-density clusters in the axon initial segment (AIS), at ankyrin-G-deficient sites, on the surface of neocortical and hippocampal pyramidal neurons (PubMed:24477962). KCNB1-containing AIS clusters localize either in close apposition to smooth endoplasmic reticulum cisternal organell
<b>Tissue Specificity</b>	Expressed in neocortical pyramidal cells (PubMed:24477962). Expressed in pancreatic beta cells (at protein level) (PubMed:12403834, PubMed:14988243).

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Expressed in brain, heart, lung, liver, colon, kidney and adrenal gland (PubMed:19074135). Expressed in the cortex, amygdala, cerebellum, pons, thalamus, hypothalamus, hippocampus and substantia nigra (PubMed:19074135).

#### Function

domain:The segment S4 is probably the voltage-sensor and is characterized by a series of positively charged amino acids at every third position.,domain:The tail may be important in modulation of channel activity and/or targeting of the channel to specific subcellular compartments.,function:Mediates the voltage-dependent potassium ion permeability of excitable membranes. Channels open or close in response to the voltage difference across the membrane, letting potassium ions pass in accordance with their electrochemical gradient.,PTM:Highly phosphorylated on serine residues in the C-terminal. Differential phosphorylation on a subset of serines allows graded activity-dependent regulation of channel gating. Phosphorylation on Ser-457, Ser-541, Ser-567, Ser-607, Ser-656 and Ser-720 as well as the N-terminal Ser-15 are all regulated by calcineurin-mediated dephosphorylation. Particularly, Ser-

#### 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, shab-related subfamily. This member is a delayed rectifier potassium channel and its activity is modulated by some other family members. [provided by RefSeq, Jul 2008],

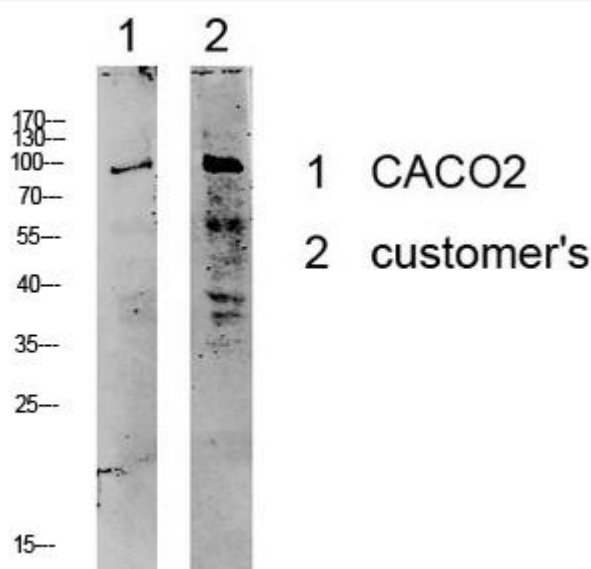
#### matters needing attention

Avoid repeated freezing and thawing!

#### Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

## Products Images



Western Blot analysis of various cells using  
Kv2.1/KCNB1 Monoclonal Antibody

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