

## Kv2.1 Polyclonal Antibody

<b>Catalog No :</b>	YT2508
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	IHC;IF;ELISA
<b>Target :</b>	Kv2.1
<b>Gene Name :</b>	KCNB1
<b>Protein Name :</b>	Potassium voltage-gated channel subfamily B member 1
<b>Human Gene Id :</b>	3745
<b>Human Swiss Prot No :</b>	Q14721
<b>Mouse Gene Id :</b>	16500
<b>Mouse Swiss Prot No :</b>	Q03717
<b>Rat Gene Id :</b>	25736
<b>Rat Swiss Prot No :</b>	P15387
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human Kv2.1/KCNB1. AA range:533-582
<b>Specificity :</b>	Kv2.1 Polyclonal Antibody detects endogenous levels of Kv2.1 protein.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications.
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

**Concentration :** 1 mg/ml

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**Storage Stability :** -15°C to -25°C/1 year(Do not lower than -25°C)

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**Molecularweight :** 96kD

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**Cell Pathway :** Taste transduction;

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**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],

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**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-

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**Subcellular Location :** 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

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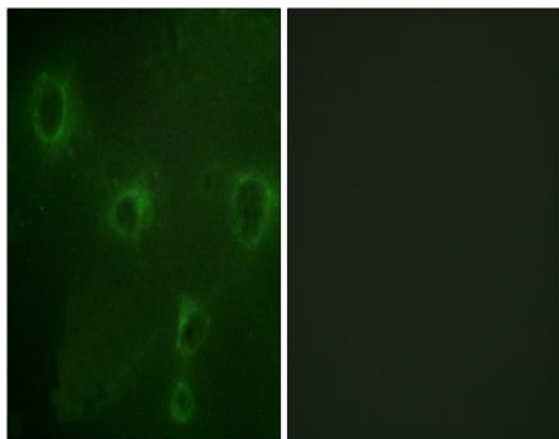
**Expression :** Expressed in neocortical pyramidal cells (PubMed:24477962). Expressed in pancreatic beta cells (at protein level) (PubMed:12403834, PubMed:14988243). Expressed in brain, heart, lung, liver, colon, kidney and adrenal gland (PubMed:19074135). Expressed in the cortex, amygdala, cerebellum, pons,

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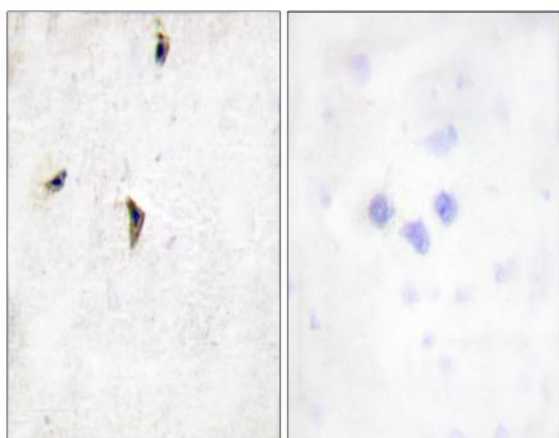
thalamus, hypothalamus, hippocampus and substantia nigra  
(PubMed:19074135).

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## Products Images



Immunofluorescence analysis of COS7 cells, using Kv2.1/KCNB1 Antibody. The picture on the right is blocked with the synthesized peptide.



Immunohistochemistry analysis of paraffin-embedded human brain tissue, using Kv2.1/KCNB1 Antibody. The picture on the right is blocked with the synthesized peptide.