

Product datasheet for **TA328931**

Kcnb1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (CY)HMLPGGGAHGSTRDQSI, corresponding to amino acid residues 841-857 of rat Kv2.1 . Intracellular, C-terminus.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	IgG fraction purified on immobilized Protein A.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	potassium voltage-gated channel subfamily B member 1
Database Link:	NP_037318 Entrez Gene 3745 Human Entrez Gene 16500 Mouse Entrez Gene 25736 Rat P15387



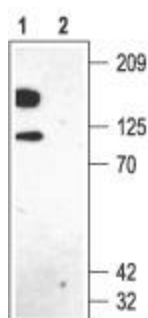
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Background:

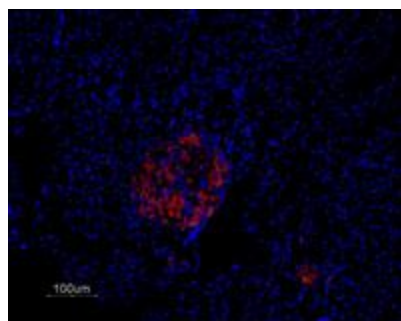
KV2.1 is a member of the voltage-gated K⁺ channel superfamily. Together with the closely related KV2.2 protein they form the KV2 subfamily also known as Shab. As with all KV channels, KV2.1 possesses the signature structure of the voltage-dependent K⁺ channels: six membrane-spanning domains with intracellular N and C termini. The functional KV channel is a tetramer that can either be a homotetramer or a heteromer of KV2.1 and KV2.2 subunits. Both KV2.1 and KV2.2 channels are known as delayed rectifiers that is, channels that are activated by changes in membrane potential (depolarization) but inactivate very slowly. The current they form is known as IK or IDR. Accessory subunits such as KChaP and the electrically silent subunits KV8 and KV9 can modulate biochemical and biophysical properties of KV2.1. KV2.1 is widely expressed throughout the body including brain, lung, pancreas, skeletal muscle and pulmonary artery. The main function of KV2.1 is to maintain membrane potential and to modulate the electrical excitability in neurons and muscle. In rat pulmonary artery it probably mediates hypoxic pulmonary vasoconstriction together with the KV9.3 subunit. Several toxins from spider venoms are potent blockers (affecting the channels in the nanomolar range) of KV2.1 channels. Among these the most potent and selective are Stomatoxin-1, (12.7 nM) and Hanatoxin (42 nM).

Synonyms:

DRK1; h-DRK1; Kv2.1

Product images:

Western blot analysis of rat brain membranes: 1. Anti-Kv2.1 antibody, (1:500). 2. Anti-Kv2.1 antibody, preincubated with the control peptide antigen.



Expression of Kv2.1 in rat pancreas. Immunohistochemical staining of rat paraffin embedded pancreas sections using Anti-Kv2.1 antibody, (1:50), followed by goat anti-rabbit-AlexaFluor-555 secondary antibody. Endocrine (Islets of Langerhans) and exocrine areas of pancreas section are shown. Strong and highly specific Kv2.1 staining is evident only in endocrine cells (red). Hoechst 33342 is used as the counterstain (blue).