

Product datasheet for **TA328975**

Kcnk18 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IF, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)EAEENPELKKFLDD, corresponding to amino acid residues 62-75 of mouse K2P18.1. 1st extracellular loop.
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, 0.025% NaN ₃ .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized peptide.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	potassium channel, subfamily K, member 18
Database Link:	NP_997144 Entrez Gene 445371 Rat Entrez Gene 332396 Mouse Q6VV64



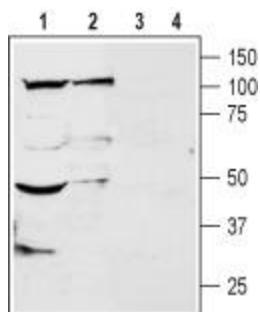
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Background:

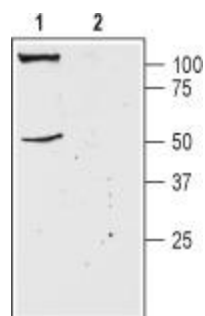
K2P18.1 (also named TWIK-related spinal cord K⁺ channel, TRESK or KCNK18) is a member of the 2-pore (2P) domain K⁺ channels family that in mammals includes 15 members. These channels show little time or voltage dependence and are considered to be “leak” or “background” K⁺ channels, thereby generating background currents which help set the membrane resting potential and control cell excitation. The K2P channels have a signature topology that includes four transmembrane domains and two pore domains with intracellular N- and C termini. It has been proposed that the functional channel unit is a dimer. Different K2P family members are regulated by diverse physical and chemical stimuli including temperature, pH, mechanical stretch, inhalation anesthetics, signaling pathways (PKC and PKA), arachidonic acid, etc. K2P18.1 is the only K2P channel so far, whose current is activated following Gαq-receptor coupled activation. The enhancement of K2P18.1 current involves activation of calcineurin (calcium-dependent calmodulin-dependent phosphatase 2B) following the rise in intracellular calcium that occurs subsequent to Gαq activation. In addition, K2P18.1 is potently activated by clinical concentrations of volatile anesthetics. K2P18.1 expression in humans is largely restricted to the spinal cord although in rodents it has a broader expression pattern that includes brain, testis and spleen. K2P18.1 represents the most important background K⁺ channel in dorsal root ganglion neurons and hence it has been postulated that it has an important role in acute and chronic pain as well as general anesthesia.

Synonyms:

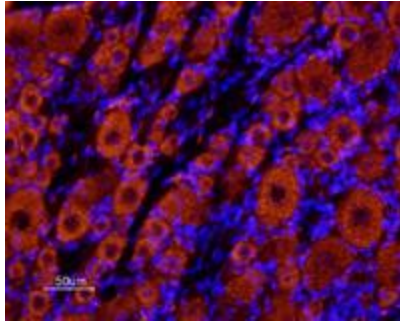
K2p18.1; TRESK; TRESK-2; TRESK2; TRIK

Product images:


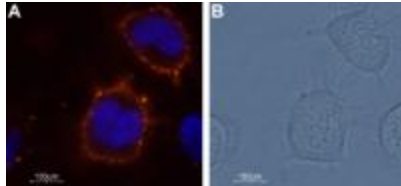
Western blot analysis of rat brain (lanes 1 and 3) and dorsal root ganglion (lanes 2 and 4) membranes: 1, 2. Anti-K2P18.1 (TRESK) (extracellular) antibody, (1:200). 3, 4. Anti-K2P18.1 (TRESK) (extracellular), preincubated with the control peptide antigen.



Western blot analysis of mouse brain membranes: 1. Anti-K2P18.1 (TRESK) (extracellular) antibody, (1:200). 2. Anti-K2P18.1 (TRESK) (extracellular) antibody, preincubated with the control peptide antigen.



Expression of K2P18.1 in rat dorsal root ganglia. Immunohistochemical staining of rat dorsal root ganglia (DRG) frozen sections using Anti-K2P18.1 (TRESK) (extracellular) antibody, (1:100) followed by Alexa 555-labeled secondary antibody (red staining). Both big/medium sized neurons and small neurons are stained. Note that glial cells and axonal fibers are not stained. Hoechst 33342 is used as the counterstain (blue staining).



Expression of K2P18.1 in ND7/23 cell line. Immunocytochemical staining of K2P18.1 channel in a mouse/rat neuroblastoma x dorsal root ganglion neuron hybrid cell line (ND7/23). A. Cells were stained with Anti-K2P18.1 (TRESK) (extracellular) antibody, (1:50) followed by goat-anti-rabbit-AlexaFluor-555 secondary antibody (red). Nuclei were visualized with the cell permeable dye Hoechst 33342 (blue staining). B. Show visible light images of the cells shown on (A).