

# KCNK10 (TREK-2) Polyclonal Antibody

Catalog # AP63687

## **Product Information**

Application	WB, IHC-P
Primary Accession	<u>P57789</u>
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	59765

#### **Additional Information**

Gene ID	54207
Other Names	Potassium channel subfamily K member 10 (Outward rectifying potassium channel protein TREK-2) (TREK-2 K(+) channel subunit)
Dilution	WB~~WB 1:1000-2000, IHC 1:100-200 IHC-P~~WB 1:1000-2000, IHC 1:100-200
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

# **Protein Information**

Name	KCNK10 {ECO:0000303 PubMed:25766236, ECO:0000312 HGNC:HGNC:6273}
Function	K(+) channel that conducts voltage-dependent outward rectifying currents upon membrane depolarization. Voltage sensing is coupled to K(+) electrochemical gradient in an 'ion flux gating' mode where outward but not inward ion flow opens the gate. Converts to voltage-independent 'leak' conductance mode upon stimulation by various stimuli including mechanical membrane stretch, acidic pH, heat and lipids (PubMed: <u>10880510</u> , PubMed: <u>25766236</u> , PubMed: <u>26919430</u> , PubMed: <u>38605031</u> ). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties (PubMed: <u>30573346</u> ). In trigeminal ganglia sensory neurons, the heterodimer of KCNK10/TREK-2 and KCNK18/TRESK inhibits neuronal firing and neurogenic inflammation by stabilizing the resting membrane potential at K(+) equilibrium potential as well as by regulating the threshold of action potentials and the spike frequency (By similarity). Permeable to other monovalent ions such as Rb(+) and Cs(+) (PubMed: <u>26919430</u> ).
Cellular Location	Cell membrane {ECO:0000250 UniProtKB:Q8BUW1}; Multi-pass membrane protein

[Isoform A]: Abundantly expressed in pancreas and kidney and to a lower level in brain, testis, colon, and small intestine. In brain, mainly expressed in cerebellum, occipital lobe, putamen, and thalamus. No expression is detected in amygdala and spinal cord. [Isoform C]: Abundantly expressed in brain.

### Background

Outward rectifying potassium channel. Produces rapidly activating and non-inactivating outward rectifier K(+) currents. Activated by arachidonic acid and other naturally occurring unsaturated free fatty acids.

#### Images



Western blot analysis of 1) Mouse BrainTissue, 2)Rat Brain Tissue, 3) Jurkat with KCNK10(TREK-2) Rabbit pAb diluted at 1:2,000.

Immunohistochemical analysis of paraffin-embedded Rat BrainTissue using KCNK10 (TREK-2) Rabbit pAb diluted at 1:200.

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