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KCNK4 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI10827

Product Information

Application	WB
Primary Accession	Q9NYG8
Other Accession	NM_033310, NP_201567
Reactivity	Human, Rat, Pig, Dog, Horse, Bovine
Predicted	Human, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42704

Additional Information

Gene ID	50801
Alias Symbol	K2p4.1, TRAAK, TRAAK1
Other Names	Potassium channel subfamily K member 4, TWIK-related arachidonic acid-stimulated potassium channel protein, TRAAK, Two pore potassium channel KT4.1, Two pore K(+) channel KT4.1, KCNK4, TRAAK
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-KCNK4 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	KCNK4 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KCNK4 {ECO:0000303|Ref.2, ECO:0000312|HGNC:HGNC:6279}
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, basic pH, heat and lipids (PubMed:22282805, PubMed:25471887, PubMed:25500157, PubMed:26919430, PubMed:30290154, PubMed:38605031). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties

(PubMed:26919430). At trigeminal A-beta afferent nerves, the heterodimer of KCNK2/TREK-1 and KCNK4/TRAAK is mostly coexpressed at nodes of Ranvier where it conducts voltage-independent mechanosensitive and thermosensitive currents, allowing rapid action potential repolarization, high speed and high frequence saltatory conduction on myelinated nerves to ensure prompt sensory responses (By similarity). Permeable to other monovalent cations such as Rb(+) and Cs(+) (PubMed:26919430).

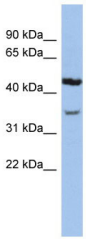
Cellular Location

Cell membrane; Multi-pass membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:G3V8V5}. Note=Localizes at the Ranvier nodes of myelinated afferent nerves {ECO:0000250|UniProtKB:G3V8V5}

References

Mehrle,A., Nucleic Acids Res. 34 (DATABASE ISSUE), D415-D418 (2006)Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.Publications:Bogdan, R. et al. 5-HTTLPR genotype and gender, but not chronic fluoxetine administration, are associated with cortical TREK1 protein expression in rhesus macaques. Neurosci. Lett. 503, 83-6 (2011). WB, Bovine, Dog, Pig, Human, H, Rat, Guinea pig21871532

Images



WB Suggested Anti-KCNK4 Antibody Titration: 0.2-1 µg/ml
ELISA Titer: 1:12500
Positive Control: Jurkat cell lysate