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KCNK9 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI12025

Product Information

Application	WB, IHC
Primary Accession	Q9NPC2
Other Accession	NM_016601, NP_057685
Reactivity	Human, Mouse, Rat, Rabbit, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Chicken, Guinea Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42264

Additional Information

Gene ID	51305
Alias Symbol	K2p9.1, KT3.2, MGC138268, MGC138270, TASK-3, TASK3
Other Names	Potassium channel subfamily K member 9, Acid-sensitive potassium channel protein TASK-3, TWIK-related acid-sensitive K(+) channel 3, Two pore potassium channel KT3.2, Two pore K(+) channel KT3.2, KCNK9, TASK3
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-KCNK9 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	KCNK9 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KCNK9 {ECO:0000303|PubMed:18678320, ECO:0000312|HGNC:HGNC:6283}
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 (PubMed:11042359, PubMed:11431495, PubMed:26919430, PubMed:38630723). Changes ion selectivity and becomes permeable to Na(+) ions in response to extracellular acidification. Protonation of the pH sensor His-98 stabilizes C-type inactivation conformation likely converting the channel from outward K(+)-conducting, to inward Na(+)-conducting to nonconductive state (PubMed:22948150,

PubMed:38630723). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties (By similarity) (PubMed:23169818, PubMed:38630723). Allows K(+) currents with fast-gating kinetics important for the repolarization and hyperpolarization phases of action potentials (By similarity). In granule neurons, hyperpolarizes the resting membrane potential to limit intrinsic neuronal excitability, but once the action potential threshold is reached, supports high- frequency action potential firing and increased neuronal excitability. Homomeric and/or heteromeric KCNK3:KCNK9 channels operate in cerebellar granule cells, whereas heteromeric KCNK1:KCNK9 enables currents in hippocampal dentate gyrus granule neurons (By similarity). Dispensable for central chemosensory respiration i.e. breathing controlled by brainstem CO2/pH, it rather conducts pH-sensitive currents and controls the firing rate of serotonergic raphe neurons involved in potentiation of the respiratory chemoreflex (By similarity). In retinal ganglion cells, mediates outward currents that regulate action potentials in response to acidification of the synaptic cleft. Involved in transmission of image-forming and nonimage-forming visual information in the retina (By similarity). In adrenal gland, contributes to the maintenance of a hyperpolarized resting membrane potential of aldosterone-producing cells at zona glomerulosa and limits aldosterone release as part of a regulatory mechanism that controls arterial blood pressure and electrolyte homeostasis (By similarity).

Cellular Location

Cell membrane; Multi-pass membrane protein. Mitochondrion inner membrane {ECO:0000250|UniProtKB:Q3LS21}; Multi-pass membrane protein. Cell projection, dendrite {ECO:0000250|UniProtKB:Q3LS21}. Note=Colocalizes with MAP2 in the soma and proximal dendrites of dentate gyrus granule cells {ECO:0000250|UniProtKB:Q3LS21}

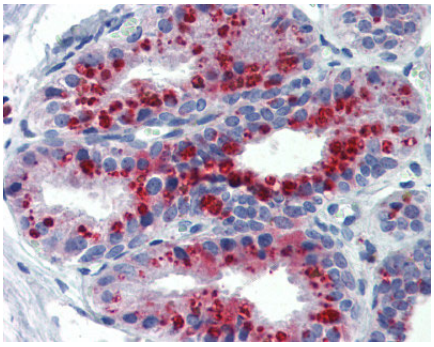
Tissue Location

Mainly found in the cerebellum. Also found in adrenal gland, kidney and lung.

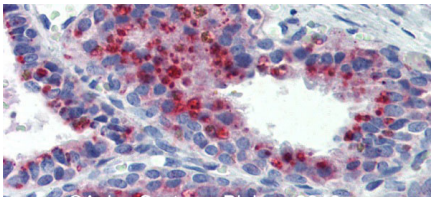
References

Rusznak,Z., (2008) Virchows Arch. 452 (4), 415-426

Images

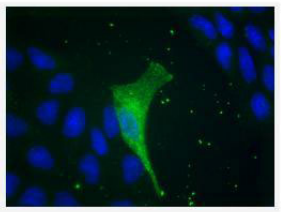


Immunohistochemistry with prostate cell lysate tissue at an antibody concentration of 5.0µg/ml using anti-KCNK9 antibody



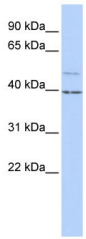
Immunohistochemistry with Human Prostate lysate tissue at an antibody concentration of 5.0µg/ml using anti-KCNK9 antibody

KCNK9



Blue:DAPI Green:KCNK9

See IHC 3 Data and Customer Feedback for more Information



WB Suggested Anti-KCNK9 Antibody Titration: 1 µg/ml
Positive Control: HepG2 cell lysate

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.