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KCNK9 antibody - N-terminal region
Rabbit Polyclonal Antibody
Catalog # AI12025

Specification

KCNK9 antibody - N-terminal region - Product Information

Application	**WB, IHC**
Primary Accession	Q9NPC2
Other Accession	NM_016601, NP_057685
Reactivity	**Human, Mouse, Rat, Rabbit, Horse, Bovine, Guinea Pig**
Predicted	**Human, Mouse, Rat, Chicken, Guinea Pig**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**42kDa KDa**

KCNK9 antibody - N-terminal region - 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.

KCNK9 antibody - N-terminal region - 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:<a

href="http://www.uniprot.org/citations/26919430" target="_blank">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.

KCNK9 antibody - N-terminal region - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KCNK9 antibody - N-terminal region - Images

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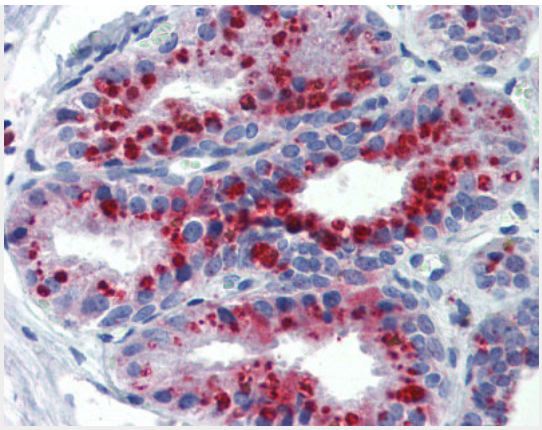
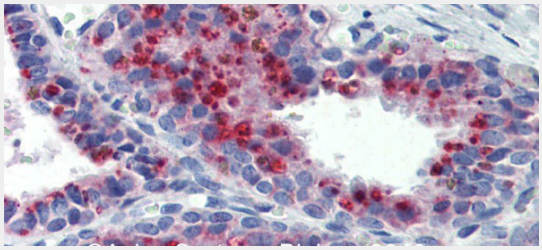
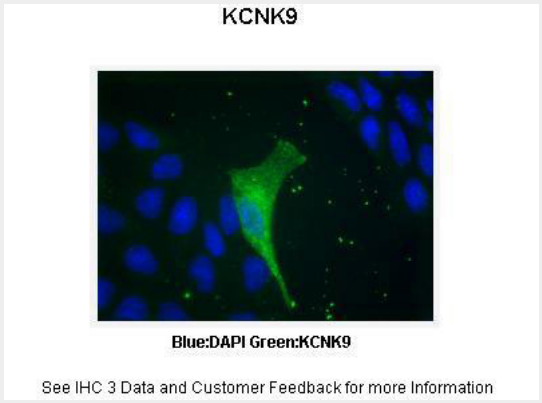


Immunohistochemistry with prostate cell lysate
tissue at an antibody concentration of 5.0µg/ml using anti-KCNK9 antibody



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



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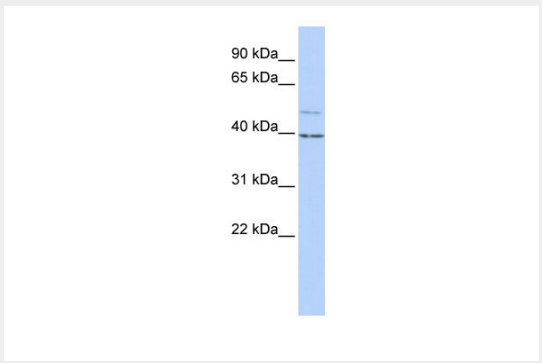

WB Suggested Anti-KCNK9 Antibody Titration: 1 µg/ml
Positive Control: HepG2 cell lysate

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KCNK9 antibody - N-terminal region - References

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