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# KCNK3 Rabbit pAb

KCNK3 Rabbit pAb
Catalog # AP94011

## Product Information

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| **Application** | WB |
| **Primary Accession** | O14649 |
| **Reactivity** | Rat, Mouse |
| **Predicted** | Dog, Human, Rabbit, Chicken, Sheep |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 43518 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human KCNK3 |
| **Epitope Specificity** | 51-150/394 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SUBCELLULAR LOCATION** | Membrane; Multi-pass membrane protein (Potential). |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | KCNK9 or TASK-3 (TWIK-related Acid sensitive K+ channel) is a member of the potassium channel family of proteins that contain two-pore domain and four transmembrane domains. These channels are characterized as leak K+ channels that are sensitive to changes in the extracellular pH. The physiological functions of TASK channels are largely unknown; it has been proposed that they may be involved in the regulation of breathing, aldosterone secretion and anesthetic-mediated neuronal activity. They were found to act in neurons' membrane potential and in resting K+ currents. KCNK9 gene has been localized to the chromosomal region 8q24. The protein is expressed at high levels mainly in the brain and at low levels in other tissues. In contrast to normal tissues, it was found that KCNK9 is amplified in some human carcinomas such as breast, lung, colon and metastatic prostate. In 10% of breast cancer patients this gene is amplified, and in 44% the protein is over expressed. Monoclonal antibodies to KNCK9 are an important tool for studying the potassium channel family of proteins in different tissues. |

## Additional Information

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| **Gene ID** | 3777 |
| **Other Names** | Potassium channel subfamily K member 3, Acid-sensitive potassium channel protein TASK-1, TWIK-related acid-sensitive K(+) channel 1, Two pore potassium channel KT3.1, Two pore K(+) channel KT3.1, KCNK3 {ECO:0000303\|PubMed:10748056, ECO:0000312\|HGNC:HGNC:6278} |

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| **Dilution** | WB=1:500-2000 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

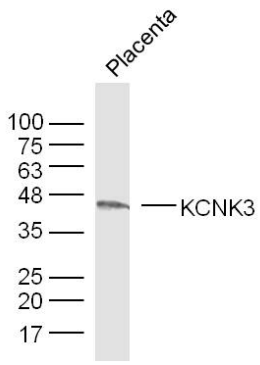
## Protein Information

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| **Name** | KCNK3 {ECO:0000303\|PubMed:10748056, ECO:0000312\|HGNC:HGNC:6278} |
| **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:23169818, PubMed:26919430, PubMed:32499642, PubMed:36195757, PubMed:9312005). 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). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties (PubMed:23169818, PubMed:32499642). Allows K(+) currents with fast- gating kinetics important for the repolarization and hyperpolarization phases of action potentials (By similarity). In cerebellar granule cells, heteromeric KCNK3:KCNK9 channel may hyperpolarize the resting membrane potential to limit intrinsic neuronal excitability, but once the action potential threshold is reached, it may support high- frequency action potential firing and increased neuronal excitability (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. Additionally, imparts chemosensitivity to type 1 cells in carotid bodies which respond to a decrease in arterial oxygen pressure or an increase in carbon dioxide pressure or pH to initiate adaptive changes in pulmonary ventilation (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). In brown adipocytes, mediates K(+) efflux that counteracts norepinephrine- induced membrane depolarization, limits Ca(2+) efflux and downstream cAMP and PKA signaling, ultimately attenuating lipid oxidation and adaptive thermogenesis (By similarity). |
| **Cellular Location** | Cell membrane; Multi-pass membrane protein |
| **Tissue Location** | Widespread expression in adult. Strongest expression in pancreas and placenta. Lower expression in brain, lung, prostate, heart, kidney, uterus, small intestine and colon |

## Background

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## Images




Sample: Placenta (Mouse) Lysate at 40 ug
Primary: Anti-KCNK3 (AP94011) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 43 kD
Observed band size: 43 kD

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