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# KCNK16 Rabbit pAb

KCNK16 Rabbit pAb
Catalog # AP56458

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | Q96T55 |
| **Predicted** | Human |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 34153 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human KCNK16 |
| **Epitope Specificity** | 231-309/309 |
| **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 |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | The protein encoded by the KCNK16 gene belongs to a family of potassium channel proteins containing two pore-forming P domains. This channel is an open rectifier which primarily passes outward current under physiological K+ concentrations. This gene is activated at alkaline pH and is expressed predominantly in the pancreas. Several alternatively spliced transcript variants encoding different isoforms have been identified. |

## Additional Information

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| **Gene ID** | 83795 |
| **Other Names** | Potassium channel subfamily K member 16, 2P domain potassium channel Talk-1, TWIK-related alkaline pH-activated K(+) channel 1, TALK-1, KCNK16 {ECO:0000303\|PubMed:34032641, ECO:0000312\|HGNC:HGNC:14464} |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |
| **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** | KCNK16 {ECO:0000303\|PubMed:34032641, ECO:0000312\|HGNC:HGNC:14464} |
| **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:11263999, PubMed:12724142, PubMed:14985088, PubMed:26919430, PubMed:28928238, PubMed:34032641, PubMed:36063992). Homo- and heterodimerizes to form functional channels with distinct regulatory and gating properties (PubMed:36063992). In pancreatic islets, conducts K(+) countercurrents for Ca(2+) release from the endoplasmic reticulum (ER) and regulates the frequency and duration of cytosolic Ca(2+) oscillations coupled to secretion of pancreatic hormones (PubMed:26239056, PubMed:28928238, PubMed:29402588, PubMed:34032641). In pancreatic beta cells, drives ER Ca(2+) efflux, which in turn activates Ca(2+)-dependent plasma membrane K(+) slow currents and cytosolic Ca(2+) influx, overall contributing to synchronous cytosolic Ca(2+) oscillations. Limits glucose-induced cytosolic Ca(2+) oscillations coupled to second-phase INS secretion (PubMed:26239056, PubMed:28928238, PubMed:34032641). Contributes to beta cell adaptation to acute inflammation by maintaining normal cytosolic Ca(2+) levels and INS secretion (By similarity). May regulate beta cell mitochondrial Ca(2+) levels either indirectly via ER Ca(2+) efflux or directly by hyperpolarizing the mitochondrial membrane potential. Limits mitochondrial Ca(2+) oscillations and ATP production involved in glucose homeostasis upon metabolic stress (By similarity). In pancreatic delta cells, limits Ca(2+)-induced Ca(2+)-release involved in somatostatin secretion and modulates islet paracrine signaling involved in glucagon secretion (PubMed:29402588). Permeable to other monovalent cations such as Rb(+) and Cs(+) (By similarity) (PubMed:26919430). |
| **Cellular Location** | [Isoform a]: Endoplasmic reticulum membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein |
| **Tissue Location** | Highly expressed in pancreas, in both endocrine (alpha, beta, gamma, delta, and epsilon) and exocrine (acinar and ductal) cells. Expressed in pacreatic beta-cells (at protein level) Expressed in pacreatic delta-cells (at protein level). Not detectable in the other tissues tested. |

## Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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