

KCNK16 Rabbit pAb

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Catalog # AP56458

Product Information

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

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=1:500 0-10000
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

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 pancreatic beta-cells (at protein level) Expressed in pancreatic delta-cells (at protein level). Not detectable in the other tissues tested.

Background

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