

**KCNA5 Antibody (C-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP17043b****Specification**

---

**KCNA5 Antibody (C-term) Blocking Peptide - Product Information**Primary Accession [P22460](#)**KCNA5 Antibody (C-term) Blocking Peptide - Additional Information**

Gene ID 3741

**Other Names**

Potassium voltage-gated channel subfamily A member 5, HPCN1, Voltage-gated potassium channel HK2, Voltage-gated potassium channel subunit Kv15, KCNA5

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**KCNA5 Antibody (C-term) Blocking Peptide - Protein Information**

Name KCNA5

**Function**

Voltage-gated potassium channel that mediates transmembrane potassium transport in excitable membranes. Forms tetrameric potassium- selective channels through which potassium ions pass in accordance with their electrochemical gradient. The channel alternates between opened and closed conformations in response to the voltage difference across the membrane. Can form functional homotetrameric channels and heterotetrameric channels that contain variable proportions of KCNA1, KCNA2, KCNA4, KCNA5, and possibly other family members as well; channel properties depend on the type of alpha subunits that are part of the channel (PubMed:<a href="http://www.uniprot.org/citations/12130714" target="\_blank">12130714</a>). Channel properties are modulated by cytoplasmic beta subunits that regulate the subcellular location of the alpha subunits and promote rapid inactivation (PubMed:<a href="http://www.uniprot.org/citations/12130714" target="\_blank">12130714</a>). Homotetrameric channels display rapid activation and slow inactivation (PubMed:<a href="http://www.uniprot.org/citations/8505626" target="\_blank">8505626</a>, PubMed:<a href="http://www.uniprot.org/citations/12130714" target="\_blank">12130714</a>). May play a role in regulating the secretion of insulin in normal pancreatic islets. Isoform 2 exhibits a voltage-dependent recovery from inactivation and an excessive cumulative inactivation (PubMed:<a href="http://www.uniprot.org/citations/11524461" target="\_blank">11524461</a>).

**Cellular Location**

Cell membrane; Multi-pass membrane protein

**Tissue Location**

Pancreatic islets and insulinoma.

**KCNA5 Antibody (C-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**KCNA5 Antibody (C-term) Blocking Peptide - Images****KCNA5 Antibody (C-term) Blocking Peptide - Background**

Potassium channels represent the most complex class of voltage-gated ion channels from both functional and structural standpoints. Their diverse functions include regulating neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle contraction, and cell volume. Four sequence-related potassium channel genes - shaker, shaw, shab, and shal - have been identified in *Drosophila*, and each has been shown to have human homolog(s). This gene encodes a member of the potassium channel, voltage-gated, shaker-related subfamily. This member contains six membrane-spanning domains with a shaker-type repeat in the fourth segment. It belongs to the delayed rectifier class, the function of which could restore the resting membrane potential of beta cells after depolarization and thereby contribute to the regulation of insulin secretion. This gene is intronless, and the gene is clustered with genes KCNA1 and KCNA6 on chromosome 12. [provided by RefSeq].

**KCNA5 Antibody (C-term) Blocking Peptide - References**

Bailey, S.D., et al. *Diabetes Care* 33(10):2250-2253(2010) Wipff, J., et al. *Arthritis Rheum.* 62(10):3093-3100(2010) Roberts, K.E., et al. *Gastroenterology* 139(1):130-139(2010) Dou, Y., et al. *Am. J. Physiol., Cell Physiol.* 298 (6), C1343-C1352 (2010) :Yang, Y.Q., et al. *Zhonghua Yi Xue Za Zhi* 90(16):1100-1104(2010)