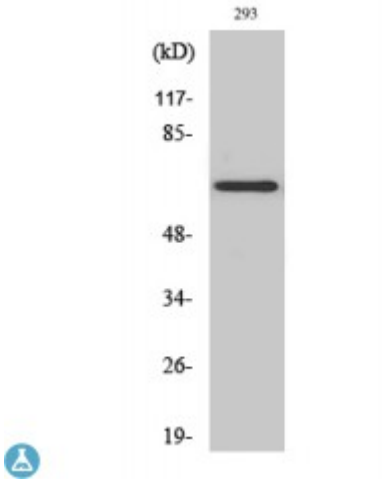
Anti-KV1.5 antibody



Description	Rabbit polyclonal to KV1.5.

Model	STJ93872
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human KV1.5
Immunogen Region	230-310 aa, Internal
Gene ID	3741
Gene Symbol	KCNA5
Dilution range	WB 1:500-1:2000ELISA 1:40000
Specificity	KV1.5 Polyclonal Antibody detects endogenous levels of KV1.5 protein.
Tissue Specificity	Pancreatic islets and insulinoma.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Potassium voltage-gated channel subfamily A member 5 HPCN1 Voltage-gated potassium channel HK2 Voltage-gated potassium channel subunit Kv1.5
Molecular Weight	63 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6224OMIM:176267
Alternative Names	Potassium voltage-gated channel subfamily A member 5 HPCN1 Voltage-gated potassium channel HK2 Voltage-gated potassium channel subunit Kv1.5
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 . Channel properties are modulated by cytoplasmic beta subunits that regulate the subcellular location of the alpha subunits and promote rapid inactivation . Homotetrameric channels display rapid activation and slow inactivation . 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 .
Sequence and Domain Family	The amino terminus may be important in determining the rate of inactivation of the channel while the C-terminal PDZ-binding motif may play a role in modulation of channel activity and/or targeting of the channel to specific subcellular compartments.; The transmembrane segment S4 functions as voltage-sensor and is characterized by a series of positively charged amino acids at every third position. Channel opening and closing is effected by a conformation change that affects the position and orientation of the voltage-sensor paddle formed by S3 and S4 within the membrane. A transmembrane electric field that is positive inside would push the positively charged S4 segment outwards, thereby opening the pore, while a field that is negative inside would pull the S4 segment inwards and close the pore. Changes in the position and orientation of S4 are then transmitted to the activation gate formed by the inner helix bundle via the S4-S5 linker region.
Cellular Localization	Cell membrane
Post-translational Modifications	Sumoylated on Lys-221, and Lys-536, preferentially with SUMO3. Sumoylation regulates the voltage sensitivity of the channel.