ARG23872
anti-KCNQ1 antibody [S37A-10]

Package: 50 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [S37A-10] recognizes KCNQ1
Tested Reactivity	Hu, Ms, Hm
Predict Reactivity	Rat
Tested Application	IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Clone	S37A-10
Isotype	IgG1
Target Name	KCNQ1
Species	Human
Immunogen	Fusion protein corresponding to aa. 2-101 of Human KCNQ1.
Conjugation	Un-conjugated
Alternate Names	Voltage-gated potassium channel subunit Kv7.1; KQT-like 1; JLNS1; LQT; KVLQT1; Kv1.9; KCNA9; IKs producing slow voltage-gated potassium channel subunit alpha KvLQT1; SQT2; RWS; LQT1; WRS; KCNA8; ATFB3; Potassium voltage-gated channel subfamily KQT member 1; Kv7.1; ATFB1

Application Instructions

Application table

Application	Dilution
IHC-P	1:1000
WB	1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

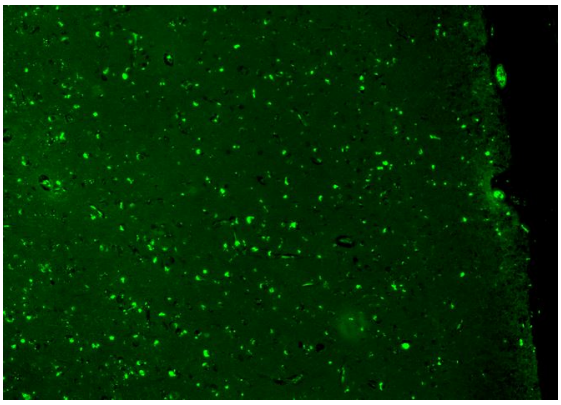
Form	Liquid
Purification	Purification with Protein G.
Buffer	PBS (pH 7.4), 0.09% Sodium azide and 50% Glycerol.
Preservative	0.09% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

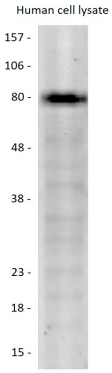
Gene Symbol	KCNQ1
Gene Full Name	potassium channel, voltage gated KQT-like subfamily Q, member 1
Background	This gene encodes a voltage-gated potassium channel required for repolarization phase of the cardiac action potential. This protein can form heteromultimers with two other potassium channel proteins, KCNE1 and KCNE3. Mutations in this gene are associated with hereditary long QT syndrome 1 (also known as Romano-Ward syndrome), Jervell and Lange-Nielsen syndrome, and familial atrial fibrillation. This gene exhibits tissue-specific imprinting, with preferential expression from the maternal allele in some tissues, and biallelic expression in others. This gene is located in a region of chromosome 11 amongst other imprinted genes that are associated with Beckwith-Wiedemann syndrome (BWS), and itself has been shown to be disrupted by chromosomal rearrangements in patients with BWS. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Aug 2011]
Function	Probably important in cardiac repolarization. Associates with KCNE1 (MinK) to form the I(Ks) cardiac potassium current. Elicits a rapidly activating, potassium-selective outward current. Muscarinic agonist oxotremorine-M strongly suppresses KCNQ1/KCNE1 current in CHO cells in which cloned KCNQ1/KCNE1 channels were coexpressed with M1 muscarinic receptors. May associate also with KCNE3 (MiRP2) to form the potassium channel that is important for cyclic AMP-stimulated intestinal secretion of chloride ions, which is reduced in cystic fibrosis and pathologically stimulated in cholera and other forms of secretory diarrhea. [UniProt]
Calculated Mw	75 kDa
PTM	Phosphorylation at Ser-27 by PKA; increases delayed rectifier potassium channel activity of the KCNQ1-KCNE1 complex through a macromolecular complex that includes PKA, PP1, and the targeting protein AKAP9. Ubiquitinated by NEDD4L; promotes internalization (PubMed:22024150). The ubiquitinylated form is internalized through a clathrin-mediated endocytosis by interacting with AP2M1 and is recycled back to the cell membrane via RAB4A and RAB11A (PubMed:23529131). Deubiquitinated by USP2; counteracts the NEDD4L-specific down-regulation of I(Ks) and restores the membrane localization. [UniProt]
Cellular Localization	Cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle membrane. Early endosome. Membrane raft. Endoplasmic reticulum. Basolateral cell membrane. [UniProt]

Images



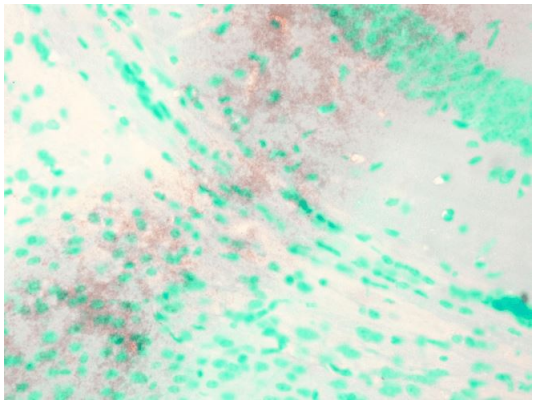
ARG23872 anti-KCNQ1 antibody [S37A-10] IHC-P image

Immunohistochemistry: Bouin's-fixed and paraffin-embedded Human hippocampus stained with ARG23872 anti-KCNQ1 antibody [S37A-10] at 1:1000 for 1 hour at RT.



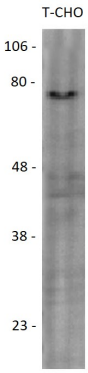
ARG23872 anti-KCNQ1 antibody [S37A-10] WB image

Western blot: 15 µg of Human cell lysate stained with ARG23872 anti-KCNQ1 antibody [S37A-10] at 1:1000 for 2 hours at RT. Block: 1.5% BSA for 30 minutes at RT.



ARG23872 anti-KCNQ1 antibody [S37A-10] IHC-P image

Immunohistochemistry: Mouse brain section fixed by 10% Formalin solution for 12-24 hours at RT and stained with ARG23872 anti-KCNQ1 antibody [S37A-10] at 1:1000 for 1 hour at RT. Counterstain: Mayer Hematoxylin nuclear stain at 250-500 µl for 5 minutes at RT.



ARG23872 anti-KCNQ1 antibody [S37A-10] WB image

Western blot: 15 µg of Hamster T-CHO cell lysate stained with ARG23872 anti-KCNQ1 antibody [S37A-10] at 1:1000 for 2 hours at RT. Block: 1.5% BSA for 30 minutes at RT.