SANTA CRUZ BIOTECHNOLOGY, INC.

KCNH6 (Q-14): sc-131962

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The Power to Question

BACKGROUND

Voltage-gated potassium channels play an essential role in controlling cellular excitability in the nervous system. They regulate a variety of properties including membrane potential as well as the frequency and structure of action potentials. KCNH6, also called potassium voltage-gated channel subfamily H member 6 or human ether-a-go-go potassium channel 2 (hEAG2), is an α subunit of a multi-pass transmembrane potassium channel family. KCNH6 functions in forming the pore of the voltage-gated channel. The channel itself is a homo- or heterotetrameric structure of pore-forming α subunits that associate with modulating β subunits. KCNH6 contains one PAS-associated C-terminal (PAC) domain, one PER-ARNT-SIM (PAS) domain and one cyclic nucleotide-binding domain. Expressed as three isoforms produced by alternative splicing, KCNH6 is present in Prolactin-secreting adenomas and throughout the brain.

REFERENCES

1. Ganetzky, B., et al. 1999. The EAG family of K^+ channels in *Drosophila* and mammals. Ann. N.Y. Acad. Sci. 868: 356-369.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608168. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Papa, M., et al. 2003. Expression pattern of the ether-a-go-go-related (ERG) K^+ channel-encoding genes ERG1, ERG2, and ERG3 in the adult rat central nervous system. J. Comp. Neurol. 466: 119-135.
4. Bauer, C.K., et al. 2003. HERG K^+ currents in human Prolactin-secreting adenoma cells. Pflugers Arch. 445: 589-600.
5. Gutman, G.A., et al. 2005. International Union of Pharmacology. LIII. Nomenclature and molecular relationships of voltage-gated potassium channels. Pharmacol. Rev. 57: 473-508.
6. Yoshida, K., et al. 2006. Quantitative structure-activity relationship studies on inhibition of HERG potassium channels. J. Chem. Inf. Model. 46: 1371-1378.

CHROMOSOMAL LOCATION

Genetic locus: KCNH6 (human) mapping to 17q23.3; Kcnh6 (mouse) mapping to 11 E1.

SOURCE

KCNH6 (Q-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KCNH6 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131962 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

KCNH6 (Q-14) is recommended for detection of KCNH6 isoforms 1, 2 and 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other KCNH family members.

KCNH6 (Q-14) is also recommended for detection of KCNH6 isoforms 1, 2 and 3 in additional species, including porcine.

Suitable for use as control antibody for KCNH6 siRNA (h): sc-93962, KCNH6 siRNA (m): sc-146365, KCNH6 shRNA Plasmid (h): sc-93962-SH, KCNH6 shRNA Plasmid (m): sc-146365-SH, KCNH6 shRNA (h) Lentiviral Particles: sc-93962-V and KCNH6 shRNA (m) Lentiviral Particles: sc-146365-V.

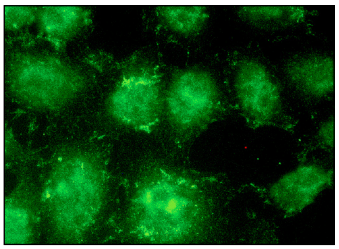
Molecular Weight of KCNH6: 110 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or PC-12 cell lysate: sc-2250.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



KCNH6 (Q-14): sc-131962. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.