

KCNH1 (T-13): sc-161766

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. KCNH1 (potassium voltage-gated channel, subfamily H (eag-related), member 1), also known as ether-a-go-go potassium channel 1, voltage-gated potassium channel subunit Kv10.1, EAG, EAG1 or h-eag, is a 989 amino acid multi-pass membrane protein belonging to the potassium channel family and H (Eag) subfamily. KCNH1 is highly expressed in myoblasts and brain, forms two alternatively spliced isoforms and exists as a pore-forming α subunit of a voltage-gated non-inactivating delayed rectifier potassium channel. Encoded by a gene located on human chromosome 1, KCNH1 forms a heteromultimer with KCNH5 and also interacts with ALG10.

REFERENCES

1. Warmke, J.W. and Ganetzky, B. 1994. A family of potassium channel genes related to eag in *Drosophila* and mammals. Proc. Natl. Acad. Sci. USA 91: 3438-3442.
2. Occhiodoro, T., et al. 1998. Cloning of a human ether-a-go-go potassium channel expressed in myoblasts at the onset of fusion. FEBS Lett. 434: 177-182.
3. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 603305. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Ding, X.W., et al. 2007. Aberrant expression of ether a go-go potassium channel in colorectal cancer patients and cell lines. World J. Gastroenterol. 13: 1257-1261.
5. Ding, X.W., et al. 2008. Expression and prognostic roles of Eag1 in resected esophageal squamous cell carcinomas. Dig. Dis. Sci. 53: 2039-2044.

CHROMOSOMAL LOCATION

Genetic locus: KCNH1 (human) mapping to 1q32.2; Kcnh1 (mouse) mapping to 1 H6.

SOURCE

KCNH1 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of KCNH1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-161766 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

KCNH1 (T-13) is recommended for detection of KCNH1 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), immunohistochemistry (including paraffin-embedded sections) (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 .

KCNH1 (T-13) is also recommended for detection of KCNH1 in additional species, including equine, canine and avian.

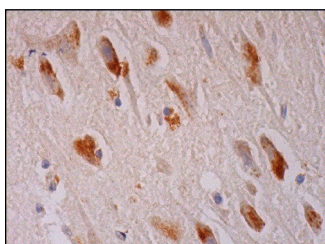
Suitable for use as control antibody for KCNH1 siRNA (h): sc-78963, KCNH1 siRNA (m): sc-146362, KCNH1 shRNA Plasmid (h): sc-78963-SH, KCNH1 shRNA Plasmid (m): sc-146362-SH, KCNH1 shRNA (h) Lentiviral Particles: sc-78963-V and KCNH1 shRNA (m) Lentiviral Particles: sc-146362-V.

Molecular Weight of KCNH1: 111 kDa.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



KCNH1 (T-13): sc-161766. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells and glial cells.

RESEARCH USE

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

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Try **KCNH1 (C-11): sc-398585**, our highly recommended monoclonal alternative to KCNH1 (T-13).