SANTA CRUZ BIOTECHNOLOGY, INC.

KCNH8 (E-18): sc-99945

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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. KCNH8 (potassium voltage-gated channel subfamily H member 8), also called Kv12.1, ELK, ELK1 or ELK3 (ether-a-go-go-like potassium channel 1 or 3), is the α subunit of a multi-pass transmembrane potassium channel. KCNH8 functions in forming the pore of the voltage-gated channel. The channel itself is a homo- or heterotetrameric structure of α subunits that associate with modulating β subunits. KCNH8 is widely expressed in the central nervous system and contains one PAC (PAS-associated C-terminal) domain, one PAS (PER-ARNT-SIM) domain and one cyclic nucleotide-binding domain.

REFERENCES

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6. London, B., Michalec, M., Mehdi, H., Zhu, X., Kerchner, L., Sanyal, S., Viswanathan, P.C., Pfahnl, A.E., Shang, L.L., Madhusudanan, M., Baty, C.J., Lagana, S., Aleong, R., Gutmann, R., Ackerman, M.J., McNamara, D.M. and Weiss, R. 2007. Mutation in glycerol-3-phosphate dehydrogenase 1 like gene (GPD1-L) decreases cardiac Na^+ current and causes inherited arrhythmias. Circulation 116: 2260-2268.

CHROMOSOMAL LOCATION

Genetic locus: KCNH8 (human) mapping to 3p24.3; Kcnh8 (mouse) mapping to 17 C.

SOURCE

KCNH8 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of KCNH8 of human origin.

STORAGE

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

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-99945 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KCNH8 (E-18) is recommended for detection of KCNH8 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.

KCNH8 (E-18) is also recommended for detection of KCNH8 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for KCNH8 siRNA (h): sc-78288, KCNH8 siRNA (m): sc-146367, KCNH8 shRNA Plasmid (h): sc-78288-SH, KCNH8 shRNA Plasmid (m): sc-146367-SH, KCNH8 shRNA (h) Lentiviral Particles: sc-78288-V and KCNH8 shRNA (m) Lentiviral Particles: sc-146367-V.

Molecular Weight of KCNH8: 124 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.