

KCNE1 (E-16): sc-22922

BACKGROUND

Voltage-gated K⁺ channels in the plasma membrane control the repolarization and the frequency of action potentials in neurons, muscles, and other excitable cells. KCNE1 and KCNE2 are two single transmembrane domain β subunits of the delayed rectifier potassium channel I_{Kr}. In cardiac tissue, KCNE2 (also known as MiRP1) assembles with HERG, the pore-forming a subunit of I_{Kr}. In the brain, KCNE2 associates with KCNQ2 and accelerates the dissociation of KCNQ2 from the KCNQ2-KCNQ3 complex. KCNE2 also regulates the current amplitude and gating properties of the KCNQ1 K⁺ channel, and may assemble with KCNQ1 in the stomach to aid in K⁺ recycling, which is necessary for gastric acid secretion. The gene encoding human KCNE2 maps to chromosome 21q22.12. Missense mutations in the gene for KCNE2 result in congenital long QT syndrome and drug-induced cardiac arrhythmia.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Kcne1 (mouse) mapping to 16 C4.

SOURCE

KCNE1 (E-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of KCNE1 of mouse 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-22922 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KCNE1 (E-16) is recommended for detection of KCNE1 of mouse and rat 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).

KCNE1 (E-16) is also recommended for detection of KCNE1 in additional species, including porcine.

Suitable for use as control antibody for KCNE1 siRNA (m): sc-42500, KCNE1 shRNA Plasmid (m): sc-42500-SH and KCNE1 shRNA (m) Lentiviral Particles: sc-42500-V.

Molecular Weight of KCNE1: 14 kDa.

Positive Controls: Rat heart extract: sc-2393.

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.

STORAGE

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

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.