



KCNE4 (E-13): sc-34911

BACKGROUND

The KCNE genes encode small, single transmembrane domain peptides that associate with pore-forming potassium channel subunits to form mixed complexes with unique characteristics. KCNE4 is a membrane protein belonging to a family of single transmembrane domain proteins known to have dramatic effect on the gating of certain potassium channels. KCNE4 is expressed strongly in heart, skeletal muscle and kidney. Electrophysiological studies show that human KCNE4 modulates the activation of the KCNQ1 channel.

REFERENCES

1. Grunnet, M., Jespersen, T., Rasmussen, H.B., Ljungstrom, T., Jorgensen, N.K., Olesen, S.P. and Klaerke, D.A. 2002. KCNE4 is an inhibitory subunit to the KCNQ1 channel. *J. Physiol.* 542: 119-130.
2. Grunnet, M., Rasmussen, H.B., Hay-Schmidt, A., Rosenstjerne, M., Klaerke, D.A., Olesen, S.P. and Jespersen, T. 2003. KCNE4 is an inhibitory subunit to Kv1.1 and Kv1.3 potassium channels. *Biophys. J.* 85: 1525-1537.
3. Teng, S., Ma, L., Zhen, Y., Lin, C., Bahring, R., Vardanyan, V., Pongs, O. and Hui, R. 2003. Novel gene hKCNE4 slows the activation of the KCNQ1 channel. *Biochem. Biophys. Res. Commun.* 303: 808-813.
4. Lundquist, A.L., Manderfield, L.J., Vanoye, C.G., Rogers, C.S., Donahue, B.S., Chang, P.A., Drinkwater, D.C., Murray, K.T. and George, A.L., Jr. 2005. Expression of multiple KCNE genes in human heart may enable variable modulation of I(Ks). *J. Mol. Cell Cardiol.* 38: 277-287.

CHROMOSOMAL LOCATION

Genetic locus: KCNE4 (human) mapping to 2q36.3; Kcne4 (mouse) mapping to 1 C4.

SOURCE

KCNE4 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of KCNE4 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-34911 P, (100 µg 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.

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.

APPLICATIONS

KCNE4 (E-13) is recommended for detection of KCNE4 of human and, to a lesser extent, 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).

Suitable for use as control antibody for KCNE4 siRNA (h): sc-45535.

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.