

# KCNH5 (C-20): sc-69290

## 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. KCNH5, also called potassium voltage-gated channel subfamily H member 5 or human ether-a-go-go potassium channel 2 (hEAG2), is the  $\alpha$  subunit of a multi-pass transmembrane potassium channel family. KCNH5 functions in forming the pore of the voltage-gated channel. The channel itself is a homo- or heterotetrameric structure of  $\alpha$  subunits that associates with modulating  $\beta$  subunits. KCNH5 is expressed in a wide variety of tissues including brain, skeletal muscle, heart, placenta, lung, liver and, to a lesser extent, kidney.

## REFERENCES

1. Occhiodoro, T., Bernheim, L., Liu, J.H., Bijlenga, P., Sinnreich, M., Bader, C.R. and Fischer-Lougheed, J. 1998. Cloning of a human ether-a-go-go potassium channel expressed in myoblasts at the onset of fusion. *FEBS Lett.* 434: 177-182.
2. Schönherr, R., Gessner, G., Löber, K. and Heinemann, S.H. 2002. Functional distinction of human eAg1 and eAg2 potassium channels. *FEBS Lett.* 514: 204-208.
3. Ju, M. and Wray, D. 2002. Molecular identification and characterisation of the human eAg2 potassium channel. *FEBS Lett.* 524: 204-210.
4. Ju, M. and Wray, D. 2006. Molecular regions responsible for differences in activation between heag channels. *Biochem. Biophys. Res. Commun.* 342: 1088-1097.
5. Mareschi, K., Novara, M., Rustichelli, D., Ferrero, I., Guido, D., Carbone, E., Medico, E., Madon, E., Vercelli, A. and Fagioli, F. 2006. Neural differentiation of human mesenchymal stem cells: evidence for expression of neural markers and eAg K<sup>+</sup> channel types. *Exp. Hematol.* 34: 1563-1572.

## CHROMOSOMAL LOCATION

Genetic locus: KCNH5 (human) mapping to 14q23.2; Kcnh5 (mouse) mapping to 12 C3.

## SOURCE

KCNH5 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of KCNH5 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-69290 P, (100  $\mu$ 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

KCNH5 (C-20) is recommended for detection of KCNH5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

KCNH5 (C-20) is also recommended for detection of KCNH5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for KCNH5 siRNA (h): sc-75370, KCNH5 siRNA (m): sc-75371, KCNH5 shRNA Plasmid (h): sc-75370-SH, KCNH5 shRNA Plasmid (m): sc-75371-SH, KCNH5 shRNA (h) Lentiviral Particles: sc-75370-V and KCNH5 shRNA (m) Lentiviral Particles: sc-75371-V.

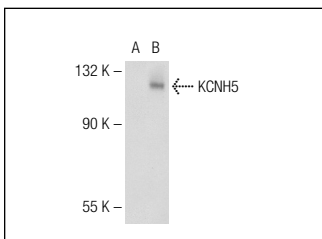
Molecular Weight of KCNH5: 112 kDa.

Positive Controls: KCNH5 (h): 293T Lysate: sc-111565.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



KCNH5 (C-20): sc-69290. Western blot analysis of KCNH5 expression in non-transfected: sc-117752 (A) and human KCNH5 transfected: sc-111565 (B) 293T whole cell lysates.

## RESEARCH USE

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

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Try **KCNH5 (A-6): sc-393777** or **KCNH5 (A-8): sc-398458**, our highly recommended monoclonal alternatives to KCNH5 (C-20).