

KCNH5 (A-6): sc-393777

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 α 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 α subunits that associates with modulating β 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., 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.
2. Schönherr, R., et al. 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.

CHROMOSOMAL LOCATION

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

SOURCE

KCNH5 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 959-984 within a C-terminal cytoplasmic domain of KCNH5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KCNH5 (A-6) is available conjugated to agarose (sc-393777 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393777 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393777 PE), fluorescein (sc-393777 FITC), Alexa Fluor® 488 (sc-393777 AF488), Alexa Fluor® 546 (sc-393777 AF546), Alexa Fluor® 594 (sc-393777 AF594) or Alexa Fluor® 647 (sc-393777 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393777 AF680) or Alexa Fluor® 790 (sc-393777 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393777 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

KCNH5 (A-6) is recommended for detection of KCNH5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 (A-6) 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.

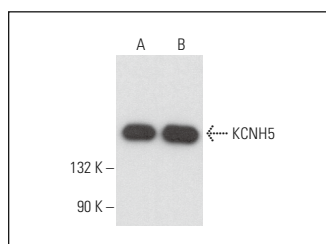
Molecular Weight of KCNH5: 112 kDa.

Positive Controls: KCNH5 (h): 293T Lysate: sc-111565, F9 cell lysate: sc-2245 or Neuro-2A whole cell lysate: sc-364185.

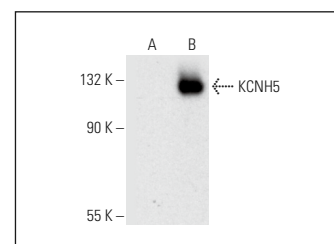
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



KCNH5 (A-6): sc-393777. Western blot analysis of KCNH5 expression in F9 (A) and Neuro-2A (B) whole cell lysates.



KCNH5 (A-6): sc-393777. Western blot analysis of KCNH5 expression in non-transfected: sc-117752 (A) and human KCNH5 transfected: sc-111565 (B) 293T whole cell lysates.

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.