

# KCNN2 (U-24): sc-101991

## BACKGROUND

Immediately following action potentials in vertebrate neurons, calcium-activated potassium channels mediate the afterhyperpolarization (AHP) that dictates the firing pattern of the neuron. KCNN2, also known as Small conductance calcium-activated potassium channel protein 2 (SK2), is a voltage-independent potassium channel that is activated by calcium prior to the AHP. By contributing to the slow component of synaptic AHP, KCNN2 is believed to regulate neuron excitability. As a widely expressed integral membrane protein, KCNN2 forms a heterooligomer composed of three other channel subunits, where each subunit is bound to a calcium-binding calmodulin subunit. KCNN2 activity can be blocked by the neurotoxins tubocurarine, apamin and scyllatoxin.

## REFERENCES

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- Desai, R., et al. 2000.  $Ca^{2+}$ -activated  $K^+$  channels in human leukemic Jurkat T cells. Molecular cloning, biochemical and functional characterization. *J. Biol. Chem.* 275: 39954-39963.
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- Xu, Y., et al. 2003. Molecular identification and functional roles of a  $Ca^{2+}$ -activated  $K^+$  channel in human and mouse hearts. *J. Biol. Chem.* 278: 49085-49094.
- Piotrowska, A.P., et al. 2003. Distribution of  $Ca^{2+}$ -activated  $K^+$  channels, SK2 and SK3, in the normal and Hirschsprung's disease bowel. *J. Pediatr. Surg.* 38: 978-983.

## CHROMOSOMAL LOCATION

Genetic locus: KCNN2 (human) mapping to 5q22.3.

## SOURCE

KCNN2 (U-24) is a Protein A purified rabbit polyclonal antibody raised against KCNN2 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## STORAGE

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

## APPLICATIONS

KCNN2 (U-24) is recommended for detection of KCNN2 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for KCNN2 siRNA (h): sc-91889, KCNN2 shRNA Plasmid (h): sc-91889-SH and KCNN2 shRNA (h) Lentiviral Particles: sc-91889-V.

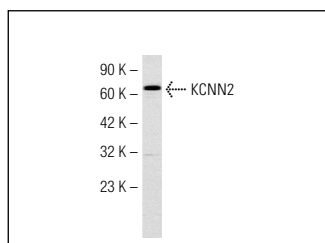
Molecular Weight of KCNN2: 57 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

## DATA



KCNN2 (U-24): sc-101991. Western blot analysis of KCNN2 expression in Hep G2 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Kerbiouri-Nabias, D., et al. 2011. Phosphatidylserine exposure and calcium-activated potassium efflux in platelets. *Br. J. Haematol.* 155: 268-270.
- Kim, J.B., et al. 2014. The large-conductance calcium-activated potassium channel holds the key to the conundrum of familial hypokalemic periodic paralysis. *Korean J. Pediatr.* 57: 445-450.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.