SANTA CRUZ BIOTECHNOLOGY, INC.

TREK-2 (F-21): sc-134111

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TREK-1 (also designated TWIK-related K^+ channel) and TREK-2 are members of the tandem-pore K^+ channel family and belong to the class of mechanosensitive and fatty acid-stimulated K^+ channels. TREK-1 has an outwardly rectifying current-voltage relationship, while TREK-2 shows inward rectification. Both TREK-1 and TREK-2 are activated by arachidonic acid and other naturally occurring unsaturated free fatty acids. These family members possess two pore-forming domains and four transmembrane segments. TREK-2 is a 538 amino acid protein and shares 65% amino acid sequence identity with TREK-1. TREK-1 is expressed in many different tissues, particularly lung and brain, while TREK-2 is expressed mainly in the cerebellum, spleen and testis.

REFERENCES

1. Pongs, O. 1992. Molecular biology of voltage-dependent potassium channels. Physiol. Rev. 72: 569-588.
2. Jan, L.Y. and Jan, Y.N. 1994. Potassium channels and their evolving gates. Nature 371: 119-122.
3. Fink, M., Duprat, F., Lesage, F., Reyes, R., Romey, G., Heurteaux, C. and Lazdunski, M. 1996. Cloning, functional expression and brain localization of a novel unconventional outward rectifier K^+ channel. EMBO J. 15: 6854-6862.
4. Wei, A., Jegla, T. and Salkoff, L. 1996. Eight potassium channel families revealed by the *C. elegans* genome project. Neuropharmacology 35: 805-829.
5. Patel, A.J., Honore, E., Maingret, F., Lesage, F., Fink, M., Duprat, F. and Lazdunski, M. 1998. A mammalian two pore domain mechano-gated S-like K^+ channel. EMBO J. 17: 4283-4290.
6. Maingret, F., Fosset, M., Lesage, F., Lazdunski, M. and Honore, E. 1999. TRAAK is a mammalian neuronal mechano-gated K^+ channel. J. Biol. Chem. 274: 1381-1387.
7. Bang, H., Kim, Y. and Kim, D. 2000. TREK-2, a new member of the mechanosensitive tandem-pore K^+ channel family. J. Biol. Chem. 275: 17412-17419.

CHROMOSOMAL LOCATION

Genetic locus: KCNK10 (human) mapping to 14q31.3.

SOURCE

TREK-2 (F-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic TREK-2 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml 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

TREK-2 (F-21) is recommended for detection of TREK-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 TREK-2 siRNA (h): sc-42347, TREK-2 shRNA Plasmid (h): sc-42347-SH and TREK-2 shRNA (h) Lentiviral Particles: sc-42347-V.

Molecular Weight (predicted) of TREK-2: 60 kDa.

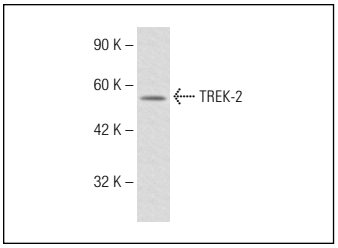
Molecular Weight (observed) of TREK-2: 56 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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



TREK-2 (F-21): sc-134111. Western blot analysis of TREK-2 expression in Jurkat whole cell lysate.

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.