

## TREK-1 (E-19): sc-11556

### BACKGROUND

TREK-1 (also designated TWIK-related K<sup>+</sup> channel) and TREK-2 are members of the tandem-pore K<sup>+</sup> channel family and belong to the class of mechano-sensitive and fatty acid-stimulated K<sup>+</sup> 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.

### CHROMOSOMAL LOCATION

Genetic locus: KCNK2 (human) mapping to 1q41; Kcnk2 (mouse) mapping to 1 H6.

### SOURCE

TREK-1 (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TREK-1 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-11556 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.

### PROTOCOLS

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

### APPLICATIONS

TREK-1 (E-19) is recommended for detection of TREK-1 of mouse, rat and 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)], 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). TREK-1 (E-19) is also recommended for detection of TREK-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TREK-1 siRNA (h): sc-37180, TREK-1 siRNA (m): sc-37181, TREK-1 shRNA Plasmid (h): sc-37180-SH, TREK-1 shRNA Plasmid (m): sc-37181-SH, TREK-1 shRNA (h) Lentiviral Particles: sc-37180-V and TREK-1 shRNA (m) Lentiviral Particles: sc-37181-V.

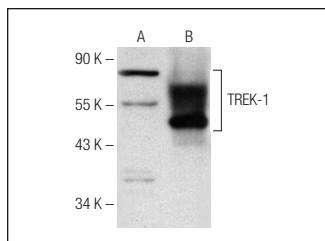
Molecular Weight of TREK-1 monomer: 45-56 kDa.

Molecular Weight of TREK-1 glycosylated homodimer: 99-112 kDa.

### RESEARCH USE

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

### DATA



TREK-1 (E-19): sc-11556. Western blot analysis of TREK-1 expression in non-transfected (A) and human TREK-1 transfected (B) HEK293T whole cell lysates.

### SELECT PRODUCT CITATIONS

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- Thomas, D., et al. 2008. Alternative translation initiation in rat brain yields K2P.2.1 potassium channels permeable to sodium. *Neuron* 58: 859-870.
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- Namiranian, K., et al. 2010. Cerebrovascular responses in mice deficient in the potassium channel, TREK-1. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 299: R461-R469.
- Cadaveira-Mosquera, A., et al. 2011. Activation of TREK currents by the neuroprotective agent riluzole in mouse sympathetic neurons. *J. Neurosci.* 31: 1375-1385.
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Try **TREK-1 (F-6): sc-398449**, our highly recommended monoclonal alternative to TREK-1 (E-19).