

TWIK-1 (V-20): sc-11481

BACKGROUND

K⁺ channels are divided into three subclasses, reflecting the number of transmembrane segments (TMS), which are designated 6TMS, 4TMS, and 2TMS. Members of the 4TMS class contain two distinct pore regions, and include TASK, TREK, TRAAK, and TWIK. TWIK-1 mRNA is expressed abundantly in brain and at lower levels in lung, kidney, and skeletal muscle. TWIK-2 shares low sequence homology with other mammalian family group members, and only 34% homology with TWIK-1. Human TWIK-2 is expressed in pancreas, placenta and heart, while mouse TWIK-2 is expressed in liver. TWIK-2 is inhibited by intracellular, but not extracellular, acidification.

REFERENCES

1. Lesage, F., et al. 1996. TWIK-1, a ubiquitous human weakly inward rectifying K⁺ channel with a novel structure. EMBO J. 15: 1004-10011.
2. Fink, M., et al. 1996. Cloning, functional expression and brain localization of a novel unconventional outward rectifier K⁺ channel. EMBO J. 15: 6854-6862.

CHROMOSOMAL LOCATION

Genetic locus: KCNK1 (human) mapping to 1q42.2; Kcnk1 (mouse) mapping to 8 E2.

SOURCE

TWIK-1 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TWIK-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-11481 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TWIK-1 (V-20) is recommended for detection of TWIK-1 of human and, to a lesser extent, mouse and rat 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).

TWIK-1 (V-20) is also recommended for detection of TWIK-1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TWIK-1 siRNA (h): sc-42349, TWIK-1 siRNA (m): sc-42350, TWIK-1 shRNA Plasmid (h): sc-42349-SH, TWIK-1 shRNA Plasmid (m): sc-42350-SH, TWIK-1 shRNA (h) Lentiviral Particles: sc-42349-V and TWIK-1 shRNA (m) Lentiviral Particles: sc-42350-V.

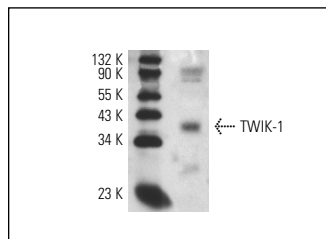
Molecular Weight of TWIK-1: 40/81 kDa.

Positive Controls: mouse brain extract: sc-2253.

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



TWIK-1 (V-20): sc-11481. Western blot analysis of TWIK-1 expression in mouse brain tissue extract.

SELECT PRODUCT CITATIONS

1. Deng, P.Y., et al. 2009. GABA_B receptor activation inhibits neuronal excitability and spatial learning in the entorhinal cortex by activating TREK-2 K⁺ channels. Neuron 63: 230-243.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **TWIK-1 (4D7): sc-517040**, our highly recommended monoclonal alternative to TWIK-1 (V-20).