



TWIK-1 (h): 293T Lysate: sc-176684

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. The molecular weight of TWIK-1 in mouse brain is 40 kDa under reducing conditions. 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. Fink, M., et al. 1996. Cloning, functional expression and brain localization of a novel unconventional outward rectifier K⁺ channel. *EMBO J.* 15: 6854-6862.
2. Lesage, F., et al. 1996. TWIK-1, a ubiquitous human weakly inward rectifying K⁺ channel with a novel structure. *EMBO J.* 15: 1004-10011.
3. Duprat, F., et al. 1997. TASK, a human background K⁺ channel to sense external pH variations near physiological pH. *EMBO J.* 16: 5464-5471.
4. Lesage, F., et al. 1997. The structure, function and distribution of the mouse TWIK-1 K⁺ channel. *FEBS Letts.* 402: 28-32.
5. Maingret, F., et al 1999. TRAAK is a mammalian neuronal mechano-gated K⁺ channel. *J. Biol. Chem.* 274: 1381-1387.
6. Pountney, D.J., et al. 1999. Identification and cloning of TWIK-originated similarity sequence (TOSS): a novel human 2-pore K⁺ channel principal subunit. *FEBS Lett.* 450: 191-196.
7. Chavez, R.A., et al. 1999. TWIK-2, a new weak inward rectifying member of the tandem pore domain potassium channel family. *J. Biol. Chem.* 274: 24440.

CHROMOSOMAL LOCATION

Genetic locus: KCNK1 (human) mapping to 1q42.2.

PRODUCT

TWIK-1 (h): 293T Lysate represents a lysate of human TWIK-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TWIK-1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TWIK-1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.