

TALK-2 (h): 293T Lysate: sc-114075

BACKGROUND

Potassium channels play an important role in cell excitability and plasticity. The pore loop domain, a highly conserved region common to all potassium channels, is involved in determining potassium ion selectivity. The family of potassium channels possessing two-pore loop domains consists of both inward- and outwardly-rectifying channels and includes THIK-1, THIK-2, TRESK, TALK-1 and TALK-2. Members of this family are all characterized by four transmembrane domains and may function to help influence the resting membrane potential of cells. TALK-2 is expressed in the exocrine pancreas and the Langerhans islets, and at lower levels in liver, placenta, heart and lung. TALK-2 is strongly- and specifically-activated by nitric oxide and dithiothreitol.

REFERENCES

1. Girard, C., Duprat, F., Terrenoire, C., Tinel, N., Fosset, M., Romey, G., Lazdunski, M. and Lesage, F. 2001. Genomic and functional characteristics of novel human pancreatic 2P domain K⁺ channels. *Biochem. Biophys. Res. Commun.* 282: 249-256.
2. Han, J., Kang, D. and Kim, D. 2003. Functional properties of four splice variants of a human pancreatic tandem-pore K⁺ channel, TALK-1. *Am. J. Physiol., Cell Physiol.* 285: C529-C538.
3. Sáez-Hernández, L., Peral, B., Sanz, R., Gómez-Garre, P., Ramos, C., Ayuso, C. and Serratosa, J.M. 2003. Characterization of a 6p21 translocation breakpoint in a generalized epilepsy. *Epilepsy Res.* 56: 155-163.
4. Kang, D. and Kim, D. 2004. Single-channel properties and pH sensitivity of two-pore domain K⁺ channels of the TALK family. *Biochem. Biophys. Res. Commun.* 315: 836-844.
5. Lin, W., Burks, C.A., Hansen, D.R., Kinnamon, S.C. and Gilbertson, T.A. 2004. Taste receptor cells express pH-sensitive leak K⁺ channels. *J. Neurophysiol.* 92: 2909-2919.
6. Duprat, F., Girard, C., Jarretou, G. and Lazdunski, M. 2005. Pancreatic 2P domain K⁺ channels TALK-1 and TALK-2 are activated by nitric oxide and reactive oxygen species. *J. Physiol.* 562: 235-244.

CHROMOSOMAL LOCATION

Genetic locus: KCNK17 (human) mapping to 6p21.2.

PRODUCT

TALK-2 (h): 293T Lysate represents a lysate of human TALK-2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

TALK-2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive TALK-2 antibodies. Recommended use: 10-20 µl per lane.

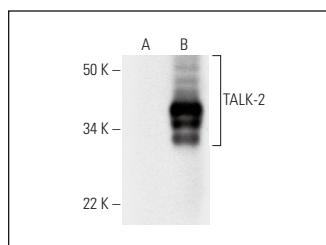
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TALK-2 (A-5): sc-393384 is recommended as a positive control antibody for Western Blot analysis of enhanced human TALK-2 expression in TALK-2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

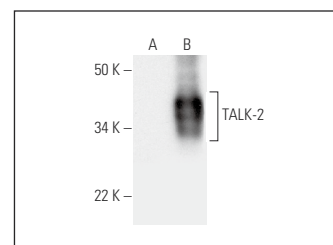
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



TALK-2 (A-5): sc-393384. Western blot analysis of TALK-2 expression in non-transfected: sc-117752 (A) and human TALK-2 transfected: sc-114075 (B) 293T whole cell lysates.



TALK-2 (F-6): sc-390435. Western blot analysis of TALK-2 expression in non-transfected: sc-117752 (A) and human TALK-2 transfected: sc-114075 (B) 293T whole cell lysates.

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.