SANTA CRUZ BIOTECHNOLOGY, INC.

TALK-2 (A-5): sc-393384

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 Langherans 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.

SOURCE

TALK-2 (A-5) is a mouse monoclonal antibody raised against amino acids 226-332 mapping near the C-terminus of TALK-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

TALK-2 (A-5) is recommended for detection of TALK-2 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for TALK-2 siRNA (h): sc-61641, TALK-2 shRNA Plasmid (h): sc-61641-SH and TALK-2 shRNA (h) Lentiviral Particles: sc-61641-V.

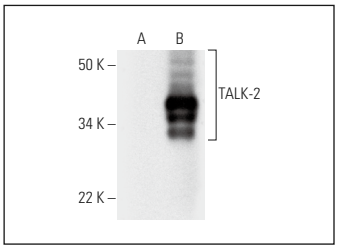
Molecular Weight of TALK-2: 37 kDa.

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

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

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.

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.