## 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., Gomez-Garre, P., Ramos, C., Ayuso, C. and Serratosa, J.M. 2003. Characterization of a $6 p 21$ 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 (H-107) is a rabbit polyclonal antibody raised against amino acids 226-332 mapping near the C -terminus of TALK-2 of human origin.

## PRODUCT

Each vial contains $200 \mu \mathrm{~g} \operatorname{lgG}$ in 1.0 ml of PBS with < $0.1 \%$ sodium azide and $0.1 \%$ gelatin.

## STORAGE

Store at $4^{\circ}$ C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

TALK-2 (H-107) is recommended for detection of TALK-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation $[1-2 \mu \mathrm{~g}$ per $100-500 \mu \mathrm{~g}$ 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 1:301:3000).

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: 36.9 kDa .

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz MarkerTM compatible goat antirabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.

