SANTA CRUZ BIOTECHNOLOGY, INC.

TRESK (M-48): sc-99180

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. TWIK-related spinal cord K^+ (TRESK) is the most sensitive volatile anesthetic-activated channel in the family and may function to mediate the effects of inhaled anesthetics in the central nervous system in a manner that is sensitive to immunosuppressive drugs. TRESK is activated by the calcium signal from calcineurin, a calcium/calmodulin-dependent phosphatase, and is highly sensitive to zinc.

REFERENCES

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4. Kang, D., et al. 2005. Thermosensitivity of the two-pore domain K^+ channels TREK-2 and TRAAK. J. Physiol. 564: 103-116.
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8. Czirják, G., et al. 2006. Zinc and mercuric ions distinguish TRESK from the other two-pore-domain K^+ channels. Mol. Pharmacol. 69: 1024-1032.
9. Kang, D., et al. 2006. TREK-2 (K2P10.1) and TRESK (K2P18.1) are major background K^+ channels in dorsal root ganglion neurons. Am. J. Physiol. Cell Physiol. 291: 138-146.

CHROMOSOMAL LOCATION

Genetic locus: Kcnk18 (mouse) mapping to 19 D3.

SOURCE

TRESK (M-48) is a rabbit polyclonal antibody raised against amino acids 1-48 mapping at the N-terminus of TRESK of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

TRESK (M-48) is recommended for detection of TRESK of 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).

Suitable for use as control antibody for TRESK siRNA (m): sc-61710, TRESK shRNA Plasmid (m): sc-61710-SH and TRESK shRNA (m) Lentiviral Particles: sc-61710-V.

Molecular Weight of TRESK: 43 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 Marker™ compatible goat anti-rabbit 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.

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.