

TASK-5 (K-14): sc-85943

BACKGROUND

Potassium (K⁺) channels are very widely distributed ion channels that function in regulating charged gradients across cell membranes which are important for resting potential generation, hormonal release and water retention. Potassium channels contain four protein subunits surrounding a central ion conducting pore. The protein subunits can be homotetrameric, producing a symmetric C4 complex, or heterotetrameric, producing a pseudo-symmetric complex. TASK-5 (potassium channel subfamily K member 15), also known as KCNK15, is a potential potassium channel subunit that is thought to form a heterodimer to complete the functional potassium channel. TASK-5 is a membrane bound 330 amino acid polypeptide found at abundant levels in pancreas, heart, placenta, lung, liver, kidney, ovary, testis, skeletal muscle and adrenal gland. TASK-5A, TASK-5B and TASK-5C are the three known variants of TASK-5 at the protein level.

REFERENCES

- Rajan, S., Wischmeyer, E., Xin Liu, G., Preisig-Müller, R., Daut, J., Karschin, A. and Derst, C. 2000. TASK-3, a novel tandem pore domain acid-sensitive K⁺ channel. An extracellular histidine as pH sensor. *J. Biol. Chem.* 275: 16650-16657.
- Kim, D. and Gnatenco, C. 2001. TASK-5, a new member of the tandem-pore K⁺ channel family. *Biochem. Biophys. Res. Commun.* 284: 923-930.
- Rajan, S., Wischmeyer, E., Karschin, C., Preisig-Müller, R., Grzeschik, K.H., Daut, J., Karschin, A. and Derst, C. 2001. THIK-1 and THIK-2, a novel subfamily of tandem pore domain K⁺ channels. *J. Biol. Chem.* 276: 7302-7311.
- Vega-Saenz de Miera, E., Lau, D.H., Zhadina, M., Pountney, D., Coetzee, W.A. and Rudy, B. 2001. KT3.2 and KT3.3, two novel human two-pore K⁺ channels closely related to TASK-1. *J. Neurophysiol.* 86: 130-142.
- Karschin, C., Wischmeyer, E., Preisig-Müller, R., Rajan, S., Derst, C., Grzeschik, K.H., Daut, J. and Karschin, A. 2001. Expression pattern in brain of TASK-1, TASK-3, and a tandem pore domain K⁺ channel subunit, TASK-5, associated with the central auditory nervous system. *Mol. Cell. Neurosci.* 18: 632-648.
- Ashmole, I., Goodwin, P.A. and Stanfield, P.R. 2001. TASK-5, a novel member of the tandem pore K⁺ channel family. *Pflugers Arch.* 442: 828-833.

CHROMOSOMAL LOCATION

Genetic locus: KCNK15 (human) mapping to 20q13.12.

SOURCE

TASK-5 (K-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of TASK-5 of human origin.

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.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85943 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TASK-5 (K-14) is recommended for detection of TASK-5 of human 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); non cross-reactive with TASK-1, TASK-2, and TASK-3

Suitable for use as control antibody for TASK-5 siRNA (h): sc-76631, TASK-5 shRNA Plasmid (h): sc-76631-SH and TASK-5 shRNA (h) Lentiviral Particles: sc-76631-V.

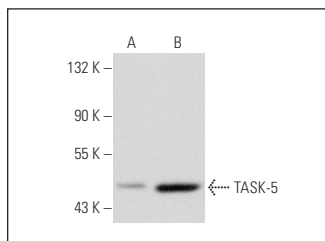
Molecular Weight of TASK-5: 36 kDa.

Positive Controls: A-673 cell lysate: sc-2414, MIA PaCa-2 cell lysate: sc-2285 or JAR cell lysate: sc-2276.

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.

DATA



TASK-5 (K-14): sc-85943. Western blot analysis of TASK-5 expression in MIA PaCa-2 (A) and JEG-3 (B) whole cell lysates.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.