SANTA CRUZ BIOTECHNOLOGY, INC.

TASK-2 (H-170): sc-28632



BACKGROUND

K⁺ channels are divided into three subclasses, reflecting the number of transmembrane segments (TMS), which are designated 6TMS, 4TMS, and 2TMS. Members of the 4TMS class contain two distinct pore regions, and include TWIK, TREK, TRAAK, and TASK. TASK channels are highly sensitive to external pH in the physiological range. TASK-1 is expressed in brain and in rat heart, with high levels of expression in the right atrium. TASK-2, mainly expressed in kidney, is localized in cortical distal tubules and collecting ducts, suggesting a role in renal K⁺ transport. TASK-3 from rat cerebellum shares 54% identity with TASK-1, but less than 30% with TASK-2 and other tandem pore K⁺ channels.

REFERENCES

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- Cluzeaud, F., et al. 1998. Expression of TWIK-1, a novel weakly inward rectifying potassium channel in rat kidney. Am. J. Physiol. 275: C1602-C1609.
- Fink, M., et al. 1998. A neuronal two P domain K⁺ channel stimulated by arachidonic acid and polyunsaturated fatty acids. EMBO J. 17: 3297-3308.
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- Kim, Y., et al. 1999. TBAK-1 and TASK-1, two-pore K⁺ channel subunits: kinetic properties and expression in rat heart. Am. J. Physiol. 277: H1669-H1678.
- Millar, J.A., et al. 2000. A functional role for the two-pore domain potassium channel TASK-1 in cerebellar granule neurons. Proc. Natl. Acad. Sci. USA 97: 3614-3618.

CHROMOSOMAL LOCATION

Genetic locus: KCNK5 (human) mapping to 6p21.2; Kcnk5 (mouse) mapping to 14 A3.

SOURCE

TASK-2 (H-170) is a rabbit polyclonal antibody raised against amino acids 330-499 mapping at the C-terminus of TASK-2 of human origin.

PRODUCT

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

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

TASK-2 (H-170) is recommended for detection of TASK-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 1:30-1:3000).

Suitable for use as control antibody for TASK-2 siRNA (h): sc-42341, TASK-2 siRNA (m): sc-42342, TASK-2 shRNA Plasmid (h): sc-42341-SH, TASK-2 shRNA Plasmid (m): sc-42342-SH, TASK-2 shRNA (h) Lentiviral Particles: sc-42341-V and TASK-2 shRNA (m) Lentiviral Particles: sc-42342-V.

Molecular Weight of TASK-2: 55 kDa.

Molecular Weight of glycosylated TASK-2: 70 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or TASK-2 (m): 293T Lysate: sc-123915.

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-2 (H-170): sc-28632. Western blot analysis of TASK-2 expression in non-transfected 293T: sc-117752 (**A**), mouse TASK-2 transfected 293T: sc-123915 (**B**) and Hep G2 (**C**) whole cell lysates. TASK-2 (H-170): sc-28632. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS Satisfation Guaranteed monoclonal alternative to TASK-2 (H-170).