SANTA CRUZ BIOTECHNOLOGY, INC.

TASK-3 (R-60): sc-28767

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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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2. Duprat, F., et al. 1997. TASK, a human background K^+ channel to sense external pH variations near physiological pH. EMBO J. 16: 5464-5471.
3. Cluzeaud, F., et al. 1998. Expression of TWIK-1, a novel weakly inward rectifying potassium channel in rat kidney. Am. J. Physiol. 275: C1602-1609.
4. 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.
5. Reyes, R., et al. 1998. Cloning and expression of a novel pH-sensitive two pore domain K^+ channel from human kidney. J. Biol. Chem. 273: 30863-30869.
6. 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: H1669-1678.
7. 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.
8. Kim, Y., et al. 2000. TASK-3, a new member of the tandem pore K^+ channel family. J. Biol. Chem. 275: 9340-9347.

SOURCE

TASK-3 (R-60) is a rabbit polyclonal antibody raised against amino acids 336-395 mapping at the C-terminus of TASK-3 of rat origin.

PRODUCT

Each vial contains 200 µg IgG 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.

RESEARCH USE

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

APPLICATIONS

TASK-3 (R-60) is recommended for detection of TASK-3 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 TASK-3 siRNA (m): sc-42344.

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.

PROTOCOLS

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