

TASK-2 (m): 293T Lysate: sc-123915

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

1. Fink, M., et al. 1996. Cloning, functional expression and brain localization of a novel unconventional outward rectifier K⁺ channel. *EMBO J.* 15: 6854-6862.
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-C1609.
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-H1678.
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.

CHROMOSOMAL LOCATION

Genetic locus: Kcnk5 (mouse) mapping to 14 A3.

PRODUCT

TASK-2 (m): 293T Lysate represents a lysate of mouse TASK-2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

TASK-2 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive TASK-2 antibodies.

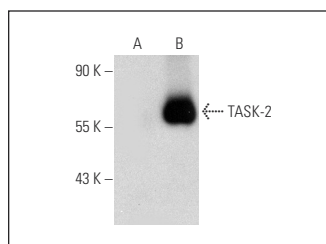
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

TASK-2 (F-7): sc-271836 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse TASK-2 expression in TASK-2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



TASK-2 (F-7): sc-271836. Western blot analysis of TASK-2 expression in non-transfected: sc-117752 (A) and mouse TASK-2 transfected: sc-123915 (B) 293T whole cell lysates.

RESEARCH USE

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