

Product Information

Anti-Potassium Channel TASK-2

produced in rabbit, affinity isolated antibody

Catalog Number **P1106**

Product Description

Anti-Potassium Channel TASK-2 (Kcnk5) is produced in rabbit using a highly purified peptide (C)YEQLMNE-YNKANS-PKGT (TASK-2₄₈₃₋₄₉₉), corresponding to amino acids 483-499 of human TASK-2,¹ with additional N-terminal cysteine as the immunogen. The antibody was affinity isolated on immobilized TASK-2₄₈₃₋₄₉₉.

Anti-Potassium Channel TASK-2 specifically recognizes TASK-2 and may be used to detect TASK-2 protein from rat by immunoblotting or immunohistochemistry.

K⁺ channels are identified by a common structural motif, namely, a highly conserved signature sequence of eight amino acids in the P domain of each channel's pore-forming α -subunit. In 1995, a new family of K⁺ channels was described. Its first member, the yeast K⁺ channel TOC1, contains two P domains within one continuous polypeptide.²⁻⁴ It contains 8 transmembrane domains, thus, resembling a Shaker-like K⁺ channel fused with an IRK-like channel.

Later, two other two-pore K⁺ channels were found. Their structure is different from that of TOK1; they contain 4 transmembrane domains and 2 P domains (4TM/2P archetype), resembling a doubled IRK-like structure. The 4TM/2P K⁺ channels have been found in *Drosophila*,⁵ and in the plant, *Arabidopsis thaliana*.⁶ The nematode, *C. elegans*, has 9 different 4TM/2P K⁺ channels that make up the most diverse group of K⁺ channels in this organism. This is particularly striking considering the nervous system of *C. elegans* is comprised of only 302 neurons. In mammals, 9 different 4TM/2P K⁺ channels, designated as the KCNK family, have been cloned.

The 4TM/2P K⁺ channels vary from weak inward rectifying to outward rectifying according to their voltage-dependence. Some of the channels are completely voltage-independent and, thus, represent a novel group of "background channels".

Reagent

Supplied lyophilized from phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin, 5% sucrose and 0.025% sodium azide.

Antibody Concentration: ~0.3 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the lyophilized vial with 0.05 ml or 0.2 ml deionized water, depending on the package size purchased. Antibody dilutions should be made in buffer containing 1-3% bovine serum albumin.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody dilution of 1:200 is recommended using rat kidney membranes

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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4. Reid, J.D. et al., *Receptors Channels*, **4**, 51 (1996).

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PHC 02/15-1