



Product Information

Anti-Potassium Channel K_{2P9.1} (TASK3)

(Acid Sensitive Potassium Channel 3; KCNK9)

Developed in Rabbit, Affinity Isolated Antibody

Product Number **P 5247**

Product Description

Anti-Potassium Channel K_{2P9.1} (TASK3) was developed in rabbit using a synthetic peptide (C)DDYQQLELVILQSEPHR corresponding to amino acid residues 57-73 of rat K_{2P9.1} as the immunogen. This sequence has 15/17 residues identical in human. The antibody was affinity isolated on immobilized immunogen.

The antibody recognizes K_{2P9.1} by Western blotting in rat cerebellum lysate.

The action of potassium (K⁺) channels is regulated by voltage, calcium and a variety of neurotransmitters. Each subfamily generally consists of a primary pore forming α subunit that is associated with several regulatory subunits.¹ To date, some 70 different genes that encode the α subunits of K⁺ channels have been identified.

The vast family of K⁺ channels has been subdivided into the three main subfamilies: the 2 TM, 4 TM and 6 TM K⁺ channels.² KCNK9 or TASK-3 is a member of the 4 TM potassium channel family, proteins that contain two-pore domain and four transmembrane domains. These channels are considered to be "leak" or "background" K⁺ channels, thereby generating background currents which help set the membrane resting potential and cell excitation. The physiological functions of TASK channels are largely unknown; it has been proposed that they may be involved in the regulation of breathing, aldosterone secretion and anesthetic-mediated neuronal activity.³⁻⁶ KCNK9 is amplified in some human carcinomas such as breast, lung, colon and metastatic prostate.^{6,7} Recently, K_{2P9.1} was found to play an important role in K⁺-dependent apoptosis of cerebellar granules.⁸

Reagent

The antibody is supplied as lyophilized powder from phosphate buffered saline containing 1% bovine serum albumin and 0.025% sodium azide as preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling.

Preparation Instructions

Reconstitute the lyophilized vial with either 0.05 ml or 0.2 ml deionized water, depending on the package size. Further dilutions should be made using a carrier protein such as BSA (1%).

Storage/Stability

Store at -20 °C. For extended storage, freeze in working aliquots. Avoid repeated freezing and thawing. Storage in "frost-free" freezers is not recommended. Centrifuge before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1:200 for immunoblotting.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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