

Product Information

Anti-KCNK9 (TASK-3) antibody, Mouse monoclonal
clone KCN-75, purified from hybridoma cell culture

Catalog Number **K0514**

Product Description

Monoclonal Anti- KCNK9 (TASK-3), Clone KCN-75, (mouse IgG2b isotype) is derived from the KCN-75 hybridoma produced by the fusion of mouse myeloma cells (NS1) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 360–374 in the C-terminus of human KCNK9. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Catalog Number ISO2).

The antibody recognizes human KCNK9. The product is useful in ELISA, immunoblotting (~40 kDa representing the KCNK9 monomer, and a weaker band at 80 kDa representing the KCNK9 dimer), and immuno-cytochemistry.

KCNK9 or TASK-3 (TWIK-related Acid sensitive K⁺ channel) is a member of the potassium channel family of proteins that contain a two-pore domain and four transmembrane domains. These channels are characterized as leak K⁺ channels that are sensitive to changes in the extracellular pH. 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. They were found to act in membrane potential of neurons and in resting K⁺ currents.¹⁻⁴

KCNK9 gene has been localized to the chromosomal region 8q24. The protein is expressed at high levels mainly in the brain and at low levels in other tissues. In contrast to normal tissues, it was found that KCNK9 is amplified in some human carcinomas such as breast, lung, colon, and metastatic prostate.^{4,5} In 10% of breast cancer patients this gene is amplified, and in 44% the protein is overexpressed.⁵

Monoclonal antibodies to KNCK9 are an important tool for studying the potassium channel family of proteins in different tissues.

Reagent

The product is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~2.4 mg/ml

Precautions and Disclaimer

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

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 is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: A working concentration of 4-8 µg/ml is determined by using a whole extract of cultured T-47D cells (human breast carcinoma).

Note: In order to obtain the best results using various techniques and preparations, it is recommended to determine the optimal working dilutions by titration.

References

1. Kim, Y. et al., J. Biol. Chem., **275**, 9340-9347 (2000).
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3. Talley, E.M. et al., J. Neurosci., **21**, 7491-7505 (2001).
4. Pei, L., Proc. Natl. Acad. Sci. USA, **100**, 7803-7807 (2003).
5. Mu, D., Cancer Cell, **3**, 297-302 (2003).

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