



Product Information

Anti-Potassium Channel K_V11.1 Extracellular

(Anti-HERG; Anti-KCNH2)

produced in rabbit, affinity isolated antibody

Product Number **P0749**

Product Description

Anti-Potassium Channel K_V11.1 Extracellular was developed in rabbit using a peptide AFLLKETEETEG-PPATEC corresponding to residues 430-445 of human K_V11.1 as the immunogen. This sequence has 11/16 residues identical in mouse and rat, and has 15/16 residues identical in rabbit and dog. The antibody was affinity isolated on immobilized immunogen.

Anti-Potassium Channel K_V11.1 recognizes K_V11.1 by immunocytochemistry and by Western blotting of HEK-K_V11.1 transfected cells. It has also been used to detect K_V11.1 by indirect Flow Cytometry of live intact K562 (human chronic myelogenous leukemia) cells.

The vast family of K⁺ channels has been subdivided into the three main subfamilies, depending on the number of transmembrane domains: the 2 TM, 4 TM and 6 TM K⁺ channels.^{1,2} The 6 TM family includes the voltage-gated potassium (K_V) channels, the KCNQ channels, the EAG channels (also including the hERG channels), and the calcium-activated potassium channels BK (Slo) and SK.

K_V11.1 is a member of the *Ether-a-go-go* (EAG) family of voltage-activated K⁺ channels.³ The hERG channel is crucial for normal action potential repolarization in cardiac myocytes. Mutations in the K_V11.1 channel cause inherited long QT syndrome, abnormalities in the repolarization of the heart that are associated with life-threatening arrhythmias and sudden death, and the drug-induced (antipsychotic therapy) long-QT syndrome is nearly always the result of blockage of this channel.^{4,5} The K_V11.1 channel is also being investigated as a possible target for cancer chemotherapy for its role in cell proliferation.^{3,6}

Reagent

The antibody is supplied as lyophilized powder from phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and 0.05% 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 0.05 or 0.2 ml deionized water, depending on package size. Further dilutions should be made using a carrier protein such as BSA (1%).

Storage/Stability

Lyophilized powder can be stored intact at room temperature for several weeks. For extended storage, it should be stored at -20 °C or below. The reconstituted solution can be stored at 2-8 °C for up to 2 weeks. For longer 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 dilutions are 1:200 for immunoblotting, 1:25 for immunocytochemistry, and 2-8 µg antibody / 1x10⁶ cells for Indirect Flow Cytometry.

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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5. Mitcheson, J.S., et al., A structural basis for drug-induced long QT syndrome, *Proc. Natl. Acad. Sci., USA*, **97**, 12329-12333 (2000).
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