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ProductInformation

Anti-Potassium Channel K_{2P}1.1 (TWIK-1)
produced in rabbit, affinity isolated antibody

Catalog Number **K0390**

Product Description

Anti-Potassium Channel K_{2P}1.1 (Inward rectifying potassium channel TWIK-1, KCNK1) is produced in rabbit using as immunogen the synthetic peptide RQELRKLKRRFLEEHEC, corresponding to amino acid residues 53-69 of human K_{2P}1.1 (KCNK1)(Gene ID 3775). The antibody is directed against a highly conserved epitope in the extracellular region of the human K_{2P}1.1 channel. The antibody is affinity purified on immobilized antigen.

Anti- Potassium Channel K_{2P}1.1 crossreacts with rat (Gene ID 59324) and mouse (Gene ID 16525) and shows 100 % homology with pig. The antibody has been used in immunoblotting and immunohistochemistry.

K_{2P}1.1 (also named TWIK-1 or KCNK1) is a member of the 2-pore (2P) domain K^+ channels family that at the moment includes 14 members. These channels show little time or voltage dependence and are considered to be “leak” or “background” K^+ channels, thereby generating background currents which help set the membrane resting potential and cell excitation. The K_{2P} channels have a signature topology that includes four transmembrane domains and two pore domains with intracellular N- and C termini.

K_{2P} channels are regulated by diverse physical and chemical stimuli including temperature, pH, mechanical stretch, inhalation anesthetics, etc. but are insensitive to the classical K^+ channel blockers.

K_{2P}1.1 was the first of the K_{2P} channels to be identified and as its original name indicates (Tandem of P domains in a Weak Inward rectifier K^+ channel) the channel behaves as a weak inward rectifier when expressed in heterologous systems. The channel is ubiquitously expressed with the most prominent expression in the brain, kidney and heart.

Reagent

Supplied as a lyophilized powder from phosphate buffered saline (PBS), pH 7.4, containing 1% BSA and 0.025% sodium azide.

Reconstitution

Reconstitute the lyophilized vial with 50µL or 200 µL deionized water, depending on package size. Further dilutions should be made using a carrier protein such as BSA (1-3%).

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.

Storage/Stability

Lyophilized powder can be stored intact at room temperature for several weeks. For extended storage, store 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. The antibody is stable for at least 12 months when stored appropriately.

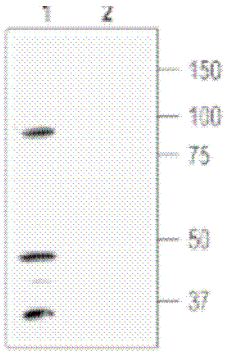
Product Profile

Immunoblotting: a working dilution of 1:200 was determined using rat brain lysates.

Immunoblotting: a working dilution of 1:300 was determined using HEK-K2P1.1 transfected cells.

Immunohistochemistry: rat brain sections.

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



Immunoblot of HEK-K2P1.1 transfected cells:
Lane 1. Anti-K2P1.1 antibody (1:300).
Lane 2. Anti-K2P1.1 antibody, preincubated with the control peptide antigen.

References

1. Lesage, F. et al., *EMBO J.* **15,** 1004-1011 (1996).
2. Lesage, F. and Lazdunski, M. *Am. J. Physiol. Renal Physiol.* **279,** F793-F801 (2000).

AH,PHC 03/07-1

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