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ProductInformation

Anti-Potassium Channel $K_{ir}6.1$

(Anti-K_{ATP} inward rectifier K^+ channel 4; Anti-KCNJ8) produced in rabbit, affinity isolated antibody

Product Number **P0874**

Product Description

Anti-Potassium Channel $K_{ir}6.1$ was developed in rabbit using a peptide, (C)KRNSMRRNNSMRRSN, corresponding to amino acid residues 382-396 of rat $K_{ir}6.1$ as the immunogen. This sequence has 15/16 residues identical in human, pig, rabbit, and mouse. The antibody was affinity isolated on immobilized immunogen.

Anti-Potassium Channel $K_{ir}6.1$ recognizes $K_{ir}6.1$ by Western blotting of rat heart membranes. The antibody is specific for $K_{ir}6.1$, it does not cross react with $K_{ir}6.2$.

The vast family of K^+ channels has been subdivided into the three main subfamilies: the 2 TM, 4 TM and 6 TM K^+ channels.[1] The 2 TM family is also known as inwardly-rectifying potassium (K_{ir}) channels. K_{ir} 6.1, like its close relative K_{ir} 6.2, is highly sensitive to inhibition by intracellular ATP. Closure of the channel leads to membrane depolarization hence coupling intracellular metabolism to cellular excitability.[2] The functional ATP sensitive channel (K_{ATP}) is composed of octamers of four K_{ir} 6.x subunits and four members of the sulfonylurea receptor family SUR1, SUR2A and SUR2B.[3]

Reagent

The antibody is supplied as lyophilized powder from phosphate buffered saline, pH 7.4, 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 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 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

1. Gutman, G.A., et al., International Union of Pharmacology. XLI. Compendium of voltage-gated ion channels: potassium channels, *Pharmacol. Rev.*, **55**, 583-586 (2003).
2. Baukrowitz, T. and Fakler, B., K_{ATP} channels gated by intracellular nucleotides and phospholipids, *Eur J Biochem.*, **267**, 5842-5848 (2000).
3. Cole, W.C., et al., ATP-sensitive K^+ channels of vascular smooth muscle cells, *J. Cardiovasc. Electrophysiol.*, **14,** 94-103 (2003).

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