

Kir3.4 (GIRK4) Antibody

Affinity purified rabbit polyclonal antibody
Catalog # AG1137

Specification

Kir3.4 (GIRK4) Antibody - Product Information

Application	WB
Primary Accession	P48548
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47783
Homology	Mouse, human, pig - identical.

Kir3.4 (GIRK4) Antibody - Additional Information

Gene ID
29713

Other Names

G protein-activated inward rectifier potassium channel 4, GIRK-4, Cardiac inward rectifier, CIR, Heart KATP channel, Inward rectifier K(+) channel Kir34, KATP-1, Potassium channel, inwardly rectifying subfamily J member 5, Kcnj5, Girk4

Related products for control experiments

Control peptide antigen (supplied with the antibody free of charge).

Target/Specificity

Peptide RNAMNQDMEIGVT(C), corresponding to amino acid residues 6-18 of rat Kir3.4 (Accession P48548). Intracellular, N-terminus.

Dilution

WB ~ 1:200-1:2000

Peptide Confirmation

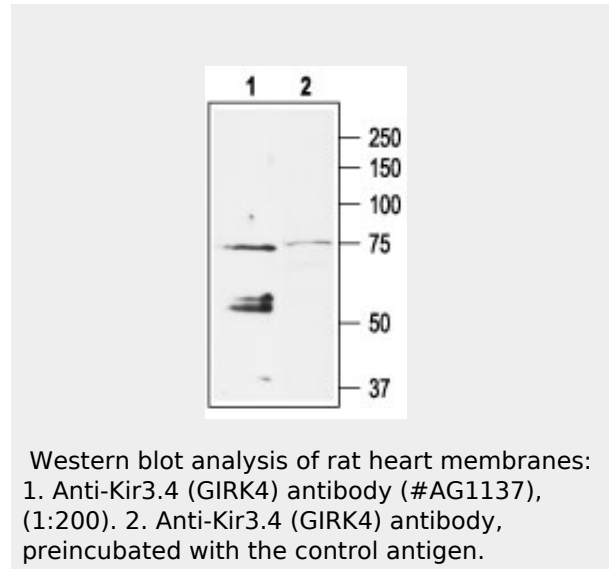
Confirmed by mass-spectrography and amino acid analysis.

Application Details

Immunohistochemistry (IH): - Mouse, rat and human heart sections (1:100) (see Liang, B. et al. (2014) in Product Citations). Also tested in mouse GIRK4^{-/-} - Rat heart sections (1:20) see Atkinson, A.J. et al. (2013) in Product Citations).

Format

Affinity purified antibody, lyophilized powder



Kir3.4 (GIRK4) Antibody - Background

Kir3.4 is a member of the G-protein regulated inward-rectifier K⁺ (GIRK) channel subfamily which is part of an inward-rectifier K⁺ channel superfamily. The GIRK subfamily comprises four members in mammals (Kir3.1- Kir3.4) that present the common topology of the inward-rectifier superfamily: two transmembrane domains flanking a highly conserved pore region with the N and C-terminus located intracellularly.

Kir3.4 and the other Kir3 family subunits can be activated by neurotransmitters and other factors via the activation of G-protein coupled receptors. Binding of the corresponding ligand to the G-protein receptor induces the dissociation of G α -GTP from the G $\beta\gamma$ dimer. The latter directly binds to Kir3 and activates the channel. Kir3.4 expression is largely confined to the heart, where it co-assembles with Kir3.1 to form the prototypical muscarinic-gated K⁺ channel KACH. Indeed, knockout mice for Kir3.4 showed impaired heart rate following vagal nerve stimulation.

A peptide toxin originating from the Apis mellifera bee venom, Tertiapin (#STT-250) was shown to be a potent blocker of Kir3.4 containing channels (8.6 nM for the Kir3.1/3.4 combination).⁴

Kir3.4 (GIRK4) Antibody - References

Reconstitution

50 µl or 0.2 ml deionized water, depending on the sample size.

Antibody Concentration After Reconstitution

0.8 mg/ml.

Storage Before Reconstitution

Lyophilized powder can be stored intact at room temperature for several weeks. For longer periods, it should be stored at -20°C.

Storage After Reconstitution

The reconstituted solution can be stored at 4°C for up to 2 weeks. For longer periods, small aliquots should be stored at -20°C or below. Avoid multiple freezing and thawing. The further dilutions should be made using a carrier protein such as BSA (1%). Centrifuge all antibody preparations before use (10000 × g 5 min).

Control Antigen Storage Before Reconstitution

Lyophilized powder can be stored intact at room temperature for several weeks. For longer periods, it should be stored at -20°C.

Control Antigen Reconstitution

100 µl water.

Control Antigen Storage After Reconstitution

-20°C.

PreadSORption Control

1 µg peptide per 1 µg antibody.

Formulation

Lyophilized powder. Phosphate buffered saline (PBS) pH 7.4, 1% BSA, 0.025% Na₃N.

1. Mark, M.D. Herlitz, S. (2000) Eur. J. Biochem. 267, 5830
2. Yamada, M. et al. (1998) Pharmacol. Rev. 50, 723.
3. Wickman, K. et al. (1998) Neuron 20, 103.
4. Jin, W. and Lu, Z. (1998) Biochemistry 37, 13291.

Kir3.4 (GIRK4) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)