Datasheet for ABIN7043471

anti-KCNJ10 antibody (Extracellular)

2 Images

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Overview

Quantity:	25 µL
Target:	KCNJ10
Binding Specificity:	AA 93-106, Extracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This KCNJ10 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunochromatography (IC), Live Cell Imaging (LCI)

Product Details

Purpose:	A Rabbit Polyclonal Antibody to Kir4.1 (KCNJ10) Channel
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)HGDLLELGPPANHT, corresponding to amino acid residues 93-106 of rat Kir4.1
Isotype:	IgG
Specificity:	Extracellular loop
Cross-Reactivity:	Human, Mouse, Rat
Cross-Reactivity (Details):	May have some cross-reactivity with rat Kir4.2 (Accession Q91ZF1).
Predicted Reactivity:	Mouse - identical, human - 13,14 amino acid residues identical

Product Details

Characteristics:	Anti-Kir4.1 (KCNJ10) (extracellular) Antibody (ABIN7043471, ABIN7045064 and ABIN7045065) is a highly specific antibody directed against an epitope of the rat protein. The antibody can be used in western blot, immunohistochemistry, and live cell imaging applications. It has been designed to recognize Kir4.1 potassium channel from rat, mouse, and human samples.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	KCNJ10
Alternative Name:	KCNJ10 (KCNJ10 Products)
Background:	ATP-sensitive inward rectifier potassium channel 10, KAB-2, BIR10, BIRK1, Kir1.2, Potassium channel inwardly rectifying subfamily J member 10,Kir4.1 is a member of the inward rectifying K+ channel family. The family includes 15 members that are structurally and functionally different from the voltage-dependent K+ channels.The family's topology consists of two transmembrane domains that flank a single and highly conserved pore region with intracellular N- and C-termini. As is the case for the voltage-dependent K+ channels the functional unit for the Kir channels is composed of four subunit that can assembly as either homo or heteromers.Kir channels are characterized by a K+ efflux that is limited by depolarizing membrane potentials thus making them essential for controlling resting membrane potential and K+ homeostasis.Kir4.1 is a member of the Kir4 subfamily that includes one other member: Kir4.2. Kir4.1 can co-assemble with Kir4.2 but also with other Kir channels such as Kir2.1 and Kir5.1.The Kir4 subfamily has been classified as weak rectifiers with intermediate conductance. Kir4.1, encoded by KCNJ10, is mainly expressed in brain, specifically in glia cells, but also in retina, ear and kidney.1,2It has been proposed that Kir4.1 has an essential role in glial K+ buffering, a process that re-uptakes the K+ released during neuronal activity into the intracellular interstitial space. Loss of Kir4.1 causes retinal defects and loss of endochoclear potential.3 Alternative names: Kir4.1, ATP-sensitive inward rectifier potassium channel 10, KAB-2, BIR10, BIRK1, Kir1.2, Potassium channel Inwardly rectifying subfamily J member 10
Gene ID:	29718
NCBI Accession:	NM_002241
UniProt:	P49655
Pathways:	Dicarboxylic Acid Transport, Regulation of long-term Neuronal Synaptic Plasticity

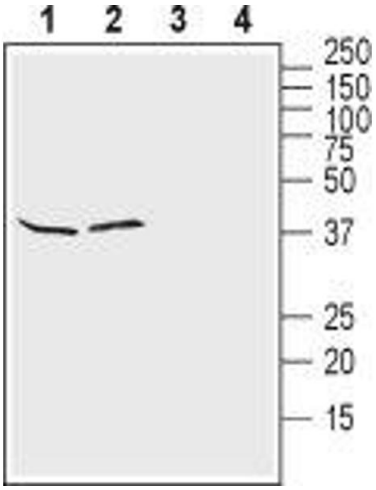
Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: N/A Application Dilutions Western blot wb: 1:500
Comment:	Cited Application: IHC Negative Control: (ABIN7236364) Blocking Peptide: (ABIN7236364)
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Recosntitute with double distilled water (DDW) to a concentration of 1.0 mg/mL.
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).

Images



Western Blotting

Image 1. Western blot analysis of rat brain lysates (lanes 1 and 3) and mouse brain lysates (lanes 2 and 4): - 1, 2. Anti-Kir4.1 (KCNJ10) (extracellular) Antibody (ABIN7043471, ABIN7045064 and ABIN7045065), (1:500).3, 4. Anti-Kir4.1 (KCNJ10) (extracellular) Antibody, preincubated with Kir4.1/KCNJ10 (extracellular) Blocking Peptide (#BLP-PC165).

Immunocytochemistry

Image 2. Expression of Kir4.1 in human U-87 MG cells - Cell surface detection of Kir4.1 in live intact human glioblastoma U-87 MG cells. A. Extracellular staining of cells using Anti-Kir4.1 (KCNJ10) (extracellular) Antibody (ABIN7043471, ABIN7045064 and ABIN7045065), (1:100) followed by goat anti-rabbit-AlexaFluor-594 secondary antibody (red). B. Live image of the cells. C. Merge of A and B.

