Datasheet for ABIN7043529

anti-KCNA5 antibody (Extracellular)

3 Images

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Overview

Quantity:	25 µL
Target:	KCNA5
Binding Specificity:	AA 268-279, Extracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This KCNA5 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Live Cell Imaging (LCI), Immunochromatography (IC), Immunofluorescence (Cultured Cells) (IF (cc))

Product Details

Purpose:	A Rabbit Polyclonal Antibody to KV1.5 (KCNA5) Channel
Immunogen:	Immunogen: Synthetic peptide Immunogen Sequence: (C)DERELLRHPPVP(K), corresponding to amino acid residues 268-279 of rat KV1.5
Isotype:	IgG
Specificity:	1st extracellular loop
Cross-Reactivity:	Human, Rat
Predicted Reactivity:	mouse - 9,Rat - 12,13 amino acid residues identical, human - 11
Characteristics:	Anti-KV1.5 (KCNA5) (extracellular) Antibody (ABIN7043529, ABIN7045046 and ABIN7045047))

Product Details

	is a highly specific antibody directed against an epitope of the rat protein. The antibody can be used in western blot, immunohistochemistry, immunocytochemistry, and indirect flow cytometry. This antibody recognizes an extracellular epitope and thus is ideally suited to detect KV1.5 in living cells. It has been designed to recognize KV1.5 from human, mouse, and rat samples.
Purification:	Affinity purified on immobilized antigen.

Target Details

Target:	KCNA5
Alternative Name:	KCNA5 (KCNA5 Products)
Background:	Potassium voltage-gated channel subfamily A member 5,KV1.5 is a mammalian voltage dependent K+ channel, homologous to the Drosophila Shaker K+ channel. KV1.5 was first cloned from the rat brain.1 Eight Shaker related genes exist in mammals constituting the KV1 subfamily of the large KV channel family of genes.2A functional KV1 channel is either a membrane spanning homotetramer or heterotetramer, which is composed of members of the same subfamily. In addition several auxiliary subunits and intracellular proteins might interact with the channel and affect its function.The structure of KV1.5 channel is similar to all KV channels and includes six membrane spanning helices creating a voltage sensor domain and a pore domain.2The channel is expressed in cardiac and smooth muscle tissue (colon, aorta, stomach and pulmonary artery) as well as in neurons and kidney.2 A loss-of-function mutation in the gene encoding the channel was found in atrial fibrillation patients, stressing its role as a cardiac action potential regulator.3The functional channel is considered transient (A-type) channel and shows prominent inactivation. Therefore, this channel activity influences the membrane potential and excitability of neurons and muscle.KV1.5 channels are sensitive to high doses of TEA (330 mM) and low doses of 4-AP (0.27 mM), the "classical" non-selective potassium channel blockers.2 Alternative names: KV1.5 (KCNA5), Potassium voltage-gated channel subfamily A member 5
Gene ID:	25470
NCBI Accession:	NM_002234
UniProt:	P19024

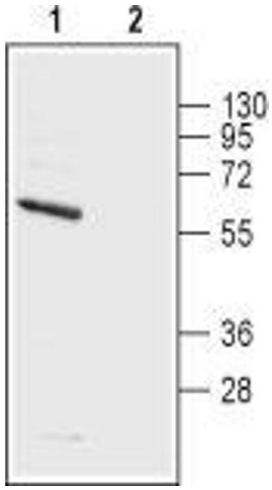
Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:200 Application Dilutions Western blot wb: 1:200
Comment:	Cited Application: IHC|ICC Negative Control: BLP-PC150 Blocking Peptide: BLP-PC150
Restrictions:	For Research Use only

Handling

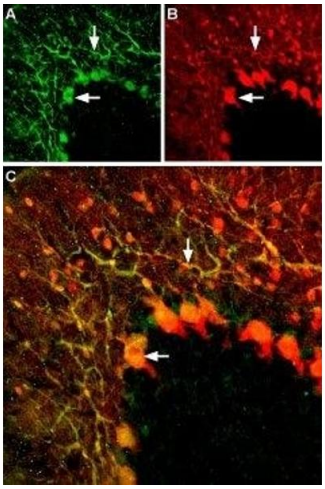
Format:	Lyophilized
Reconstitution:	0.2 mL double distilled water (DDW).
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after 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



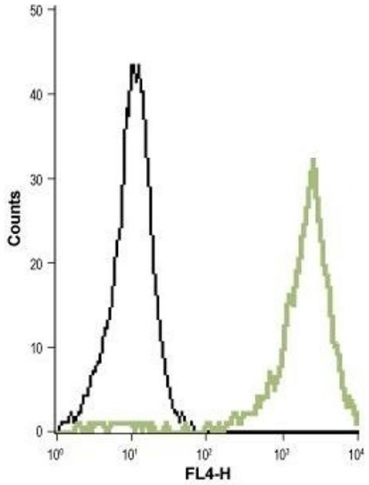
Western Blotting

Image 1. Western blot analysis of rat brain membranes: -1. Anti-KV1.5 (KCNA5) (extracellular) Antibody (ABIN7043529, ABIN7045046 and ABIN7045047), (1:200).2. Anti-KV1.5 (KCNA5) (extracellular) Antibody, preincubated with Kv1.5/KCNA5 (extracellular) Blocking Peptide (#BLP-PC150).



Immunohistochemistry

Image 2. Expression of KV1.5 channels in rat cerebellum - Immunohistochemical staining of rat cerebellum with Anti-KV1.5 (KCNA5) (extracellular) Antibody (ABIN7043529, ABIN7045046 and ABIN7045047), (1:200). A. KV1.5 (green) appears in both the soma of Purkinje cells (horizontal arrows) and in Purkinje dendrites (vertical arrows). B. Neurons expressing gamma amino butyric acid (GABA) were labeled with mouse anti-parvalbumin antibody (red). C. Merge of the two images demonstrates partial colocalization (white arrows).



Flow Cytometry

Image 3. Cell surface detection of KV1.5 in live intact THP-1 (human acute monocytic leukemia cells) cell line: (black line) Cells + Goat-anti-rabbit-Cy5. (green line) Cells + Anti-KV1.5 (KCNA5) (extracellular) Antibody (ABIN7043529, ABIN7045046 and ABIN7045047), (1:20) + goat-anti-rabbit-Cy5.