




Product datasheet

Anti-KCNQ4 antibody [N43/6] ab84820

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Overview

Product name	Anti-KCNQ4 antibody [N43/6]
Description	Mouse monoclonal [N43/6] to KCNQ4
Host species	Mouse
Tested applications	Suitable for: IHC-Fr, IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Chimpanzee 
Immunogen	Fusion protein corresponding to Human KCNQ4 aa 1-100. Database link: P56696  Run BLAST with  Run BLAST with
Positive control	Lysate from transfected COS-1 cells transiently expressing KCNQ4.
General notes	<p>The clone number has been updated from S43-6 to N43/6, both clone numbers name the same antibody clone.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 50% Glycerol, PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	N43/6
Isotype	IgG1

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab84820 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-Fr		1/1000.
IHC-P		1/1000. Fixation: Bouin's Fixative
WB		1/1000. Predicted molecular weight: 77 kDa.

Target

Function

Probably important in the regulation of neuronal excitability. May underlie a potassium current involved in regulating the excitability of sensory cells of the cochlea. KCNQ4 channels are blocked by linopirdin, XE991 and bepridil, whereas clofilium is without significant effect. Muscarinic agonist oxotremorine-M strongly suppress KCNQ4 current in CHO cells in which cloned KCNQ4 channels were coexpressed with M1 muscarinnic receptors.

Tissue specificity

Expressed in the outer, but not the inner, sensory hair cells of the cochlea. Slightly expressed in heart, brain and skeletal muscle.

Involvement in disease

Defects in KCNQ4 are the cause of deafness autosomal dominant type 2A (DFNA2A) [MIM:600101]. DFNA2A is a form of sensorineural hearing loss. Sensorineural deafness results from damage to the neural receptors of the inner ear, the nerve pathways to the brain, or the area of the brain that receives sound information.

Sequence similarities

Belongs to the potassium channel family. KQT (TC 1.A.1.15) subfamily. Kv7.4/KCNQ4 sub-subfamily.

Domain

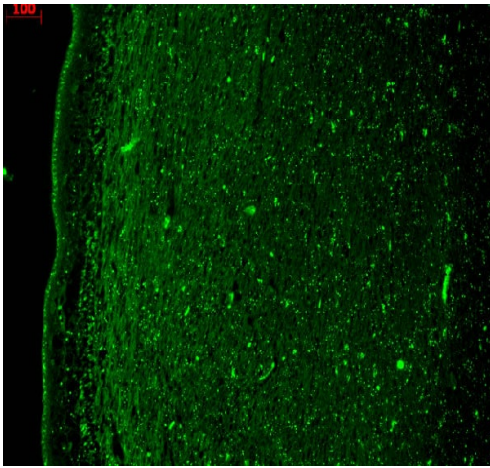
The segment S4 is probably the voltage-sensor and is characterized by a series of positively charged amino acids at every third position.

The A-domain tail carries the major determinants of channel assembly specificity. Its coiled-coil region is Four-stranded.

Cellular localization

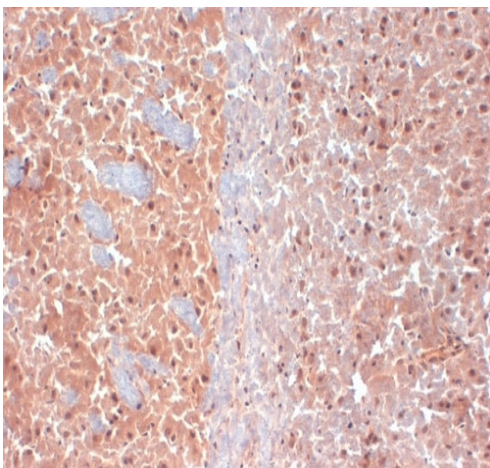
Basal cell membrane. Situated at the basal membrane of cochlear outer hair cells.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KCNQ4 antibody [N43/6] (ab84820)

Immunohistochemical analysis of paraffin-embedded human hippocampus tissue labelling KCNQ4 with ab84820 at 1/1000 dilution, for 1 hour at RT followed by secondary antibody Goat Anti-Mouse (FITC) (Green) at 1/50 dilution, for 1 hour at RT.



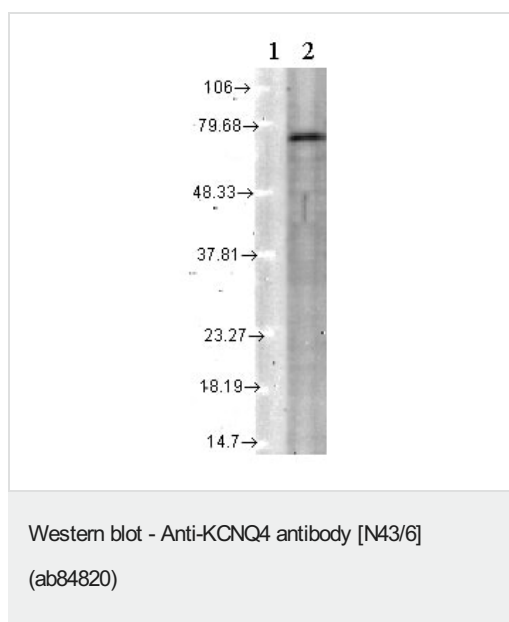
Immunohistochemistry (Frozen sections) - Anti-KCNQ4 antibody [N43/6] (ab84820)

Immunohistochemical analysis of Mouse brain tissue sections labeling KCNQ4 with ab84820 at 1/1000 dilution for 1 hour at room temperature.

Secondary Antibody: HRP/DAB Detection

System: Biotinylated Goat Anti-Mouse, Streptavidin Peroxidase, DAB Chromogen (brown) for 30 minutes at room temperature.

Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 250-500 µl for 5 minutes at room temperature



All lanes : Anti-KCNQ4 antibody [N43/6] (ab84820) at 1/1000 dilution

Lane 1 : Molecular weight marker

Lane 2 : Mixed cell lysates prepared from rat tissues Brain, Heart, Kidney, Liver, Lung, Pancreas, Skeletal Muscle, Spleen, Testes, Thymus, and H9C2 cells at 15 µg

Secondary

Lane 2 : Sheep Anti-Mouse IgG: HRP

Predicted band size: 77 kDa

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