

Datasheet for ABIN361768

anti-KCNQ4 antibody (AA 2-77)**4** Images**3** Publications[Go to Product page](#)

Overview

Quantity:	100 µg
Target:	KCNQ4
Binding Specificity:	AA 2-77
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This KCNQ4 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunoprecipitation (IP), Immunofluorescence (IF), Immunocytochemistry (ICC), Antibody Array (AA)

Product Details

Immunogen:	Fusion protein amino acids 2-77 of human KCNQ4
Clone:	N43-6 (Formerly S43-6)
Isotype:	IgG1
Specificity:	Detects ~77 kDa.
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Protein G Purified

Target Details

Target:	KCNQ4
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Target Details

Alternative Name:	KCNQ4 (KCNQ4 Products)
Background:	<p>The protein encoded by this gene forms a potassium channel that is thought to play a critical role in the regulation of neuronal excitability (1), particularly in sensory cells of the cochlea (2).</p> <p>The current generated by this channel is inhibited by M1 muscarinic acetylcholine receptors and activated by retigabine, a novel anti-convulsant drug (3).</p>
Gene ID:	9132
NCBI Accession:	NP_004691
UniProt:	P56696
Pathways:	Sensory Perception of Sound

Application Details

Application Notes:	<ul style="list-style-type: none">• WB (1:1000)• IHC (1:1000)• ICC/IF (1:100)• optimal dilutions for assays should be determined by the user.
Comment:	1 µg/ml of ABIN361768 was sufficient for detection of KCNQ4 in 10 µg of COS-1 cell lysate transiently expressing KCNQ4 by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4, 50 % glycerol, 0.09 % sodium azide, Storage buffer may change when conjugated
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	-20°C

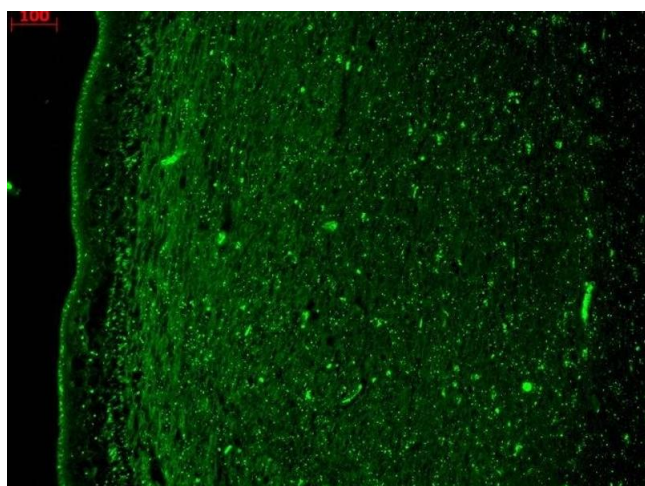
Publications

Product cited in: Marchetta, Möhrle, Eckert, Reimann, Wolter, Tolone, Lang, Wolters, Feil, Engel, Paquet-Durand, Kuhn, Knipper, Rüttiger: "Guanylyl Cyclase A/cGMP Signaling Slows Hidden, Age- and Acoustic Trauma-Induced Hearing Loss." in: **Frontiers in aging neuroscience**, Vol. 12, pp. 83, (2020) ([PubMed](#)).

Jeng, Ceriani, Hendry, Johnson, Yen, Simmons, Kros, Marcotti: "Hair cell maturation is differentially regulated along the tonotopic axis of the mammalian cochlea." in: **The Journal of physiology**, Vol. 598, Issue 1, pp. 151-170, (2020) ([PubMed](#)).

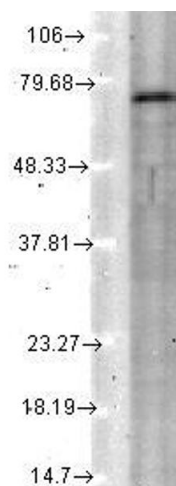
Wolter, Möhrle, Schmidt, Pfeiffer, Zelle, Eckert, Krämer, Feil, Pilz, Knipper, Rüttiger: "GC-B Deficient Mice With Axon Bifurcation Loss Exhibit Compromised Auditory Processing." in: **Frontiers in neural circuits**, Vol. 12, pp. 65, (2019) ([PubMed](#)).

Images



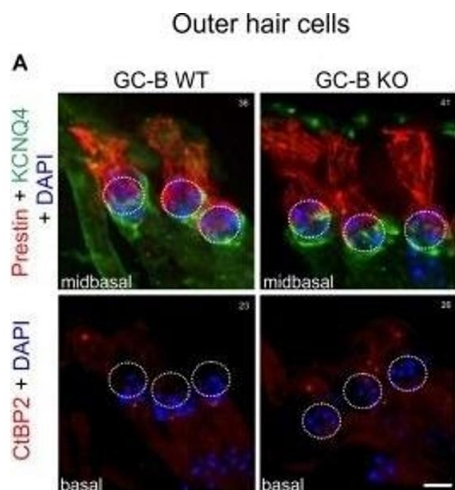
Immunohistochemistry

Image 1. Immunohistochemistry analysis using Mouse Anti-KCNQ4 Monoclonal Antibody, Clone N43/6 (ABIN361768). Tissue: hippocampus. Species: Human. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-KCNQ4 Monoclonal Antibody (ABIN361768) at 1:1000 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



Western Blotting

Image 2. KCNQ4 (S43 6), rat tissue lysate.



Immunofluorescence (Cultured Cells)

Image 3. No change in inner hair cell (IHC) or outer hair cell (OHC) phenotype or reduction in numbers of afferent synaptic contacts with OHCs or IHCs was observed in GC-B KO mice. (A) Representative immunohistochemical staining of OHCs of GC-B WT (left panels) and GC-B KO (right panels) mice with antibodies targeted against KCNQ4 (green, upper panels) and prestin (red, upper panels) shown for midbasal cochlear turns. GC-B WT and GC-B KO OHCs did not differ in OHC marker protein expression. No differences for the OHC synaptic ribbons (red, CtBP2, lower panels) was observed. (B) Quantification of OHC ribbons in apical, middle, and midbasal cochlear turns. Number of OHC synaptic ribbons did not significantly vary between genotypes in the three studied cochlear turns. Bars in (B) represent mean \pm SD ribbons per OHC, numbers in bars indicate the n of mice studied. Representative immunohistochemical staining of IHCs of GC-B WT (left panels) and GC-B KO mice (right panels) with antibodies against otoferlin (C, green), CtBP2/RIBEYE (D, red), and BK (F, red) shown for midbasal cochlear turns. Overall otoferlin staining, number of IHC synaptic ribbons (CtBP2), and BK expression were not different between genotypes. (E) Quantification of IHC ribbons in cochlear divisions of apical, middle, and midbasal turns representing low, middle and high frequency coding IHCs, respectively. No significant difference in number of synaptic ribbons was found between genotypes for either cochlear turn. Bars in (E) represent mean \pm SD ribbons per IHC, numbers in open bars indicate the n of mice from which the IHC ribbons were counted from. Nuclei in (A,C,D,F) were stained with 4',6-diamidin-2-phenylindol (DAPI, blue). Scale bars in (A,C,D,F): 5 μ m. White numbers 14-41 indicate experiment numbers. - figure provided by CiteAb. Source: PMID30275816

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN361768.