

Anti-HCN2 Picoband Antibody

Catalog # ABO10260

Product Information

Application	WB, IHC-P
Primary Accession	Q9UL51
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 2(HCN2) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	610
Other Names	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 2, Brain cyclic nucleotide-gated channel 2, BCNG-2, HCN2, BCNG2
Calculated MW	96950
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml, Rat, Human, By Heat Western blot, 0.1-0.5 μ g/ml, Mouse, Rat, Human
Subcellular Localization	Cell membrane ; Multi-pass membrane protein .
Tissue Specificity	Highly expressed throughout the brain. Detected at low levels in heart. .
Source	Eukaryota
Protein Name	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human HCN2 (682-714aa VFNNQENAI IQEIVKYDREMVQQAELGQRVGLF), identical to the related mouse sequence, and different from the related rat sequence by one amino acid.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name	HCN2 (HGNC:4846)
Synonyms	BCNG2
Function	Hyperpolarization-activated ion channel that is permeable to sodium and potassium ions. Displays lower selectivity for K(+) over Na(+) ions (PubMed: 10228147 , PubMed: 22006928). Contributes to the native pacemaker currents in heart (If) and in neurons (Ih) (PubMed: 10228147 , PubMed: 10524219). Can also transport ammonium in the distal nephron (By similarity). Involved in the initiation of neuropathic pain in sensory neurons (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Highly expressed throughout the brain. Detected at low levels in heart.

Background

Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated ion channel 2 is a protein that in humans is encoded by the HCN2 gene. The HCN2 gene is localized on human chromosome 19p13.3 and contains eight exons spanning approximately 27 kb. Hyperpolarization-activated cation channels of the HCN gene family, such as HCN2, contribute to spontaneous rhythmic activity in both heart and brain.

Images

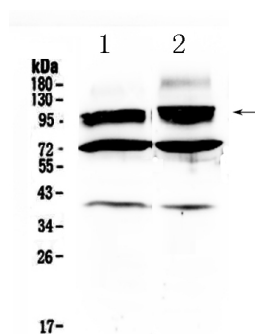
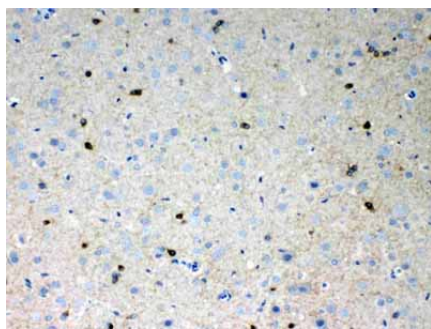


Figure 1. Western blot analysis of HCN2 using anti- HCN2 antibody (ABO10260). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat brain tissue lysates, Lane 2: mouse brain tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti- HCN2 antigen affinity purified polyclonal antibody (Catalog # ABO10260) at 0.5 µg/mL overnight at 4 °C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for HCN2 at approximately 97KD. The expected band size for HCN2 is at 97KD.

Figure 2. IHC analysis of HCN2 using anti- HCN2 antibody (ABO10260).HCN2 was detected in paraffin-embedded



section of rat brain tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti- HCN2 Antibody (ABO10260) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.