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- Forschungsprodukte & Biochemikalien
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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-HCN2 Antibody

Mouse Anti-Rat HCN2 Monoclonal IgG1
Catalog No. SMC-305

StressMarq Biosciences INC.
Discovery through partnership | Excellence through quality

Product Name

HCN2 Antibody

Description

Mouse Anti-Rat HCN2 Monoclonal IgG1

Species Reactivity

Mouse, Rat

Applications

WB, IHC, ICC/IF, IP, AM

Antibody Dilution

WB (1:1000), IHC (1:1000), ICC/IF (1:100); optimal dilutions for assays should be determined by the user.

Host Species

Mouse

Immunogen Species

Rat

Immunogen

Fusion protein amino acids 761-863 of rat HCN2

Concentration

1 mg/ml

Conjugates

Alkaline Phosphatase, APC, APC/Cy7, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, Dylight 350, Dylight 405, Dylight 488, Dylight 594, Dylight 633, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

Field Of Use

Not for use in humans. Not for use in diagnostics or therapeutics. For research use only.

Properties

Storage Buffer

PBS pH7.4, 50% glycerol, 0.09% sodium azide

Storage Temperature

-20ºC

Shipping Temperature

Blue Ice or 4ºC

Purification

Protein G Purified

Clonality

Monoclonal

Isotype

IgG1

Specificity

Detects ~95kDa. No cross-reactivity against HCN1.

Cite This Product

StressMarq Biosciences Cat# SMC-305, RRID: AB_2279443

Certificate Of Analysis

1 µg/ml of SMC-305 was sufficient for detection of HCN2 in 10 µg of rat brain lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody.

Biological Description

Alternative Names

BCNG2 Antibody, HAC1 Antibody, brain cyclic nucleotide gated channel 2 Antibody, Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel Antibody

Research Areas

Cardiovascular System, Cyclic Nucleotide-Gated Ion Channels, Heart, Ion Channels, Neuroscience

Cellular Localization

Membrane

Accession Number

NP_446136.1

Gene ID

114244

Swiss Prot

Q9JKA9

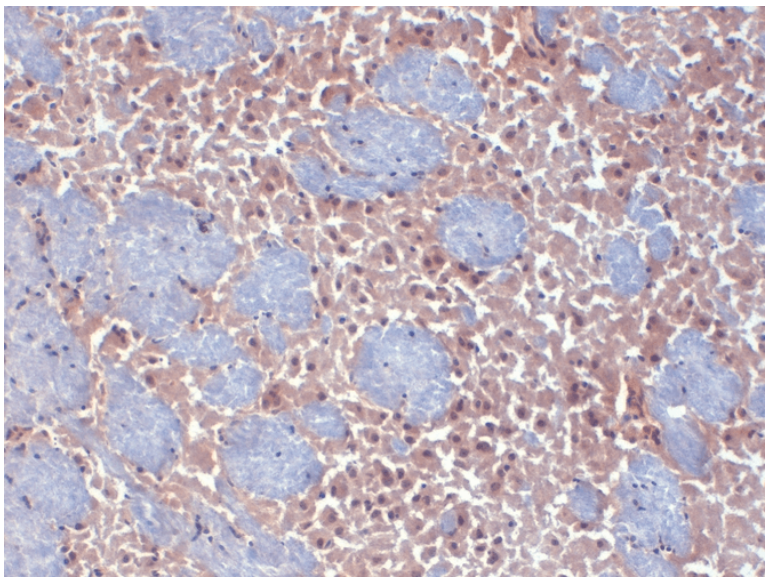
Scientific Background

Hyperpolarization-activated cyclic nucleotide-gated ion channel 2 (HCN2) is an integral membrane protein that helps establish and control the small voltage gradient across the plasma membrane of living cells by allowing the flow of ions down their electrochemical gradient (1). Ion channels are present in the membranes that surround all biological cells because their main function is to regulate the flow of ions across this membrane. Whereas some ion channels permit the passage of ions based on charge, others conduct based on a ionic species, such as sodium or potassium. Furthermore, in some ion channels, the passage is governed by a gate which is controlled by chemical or electrical signals, temperature, or mechanical forces. There are a few main classifications of gated ion channels. There are voltage- gated ion channels, ligand- gated, other gating systems and finally those that are classified differently, having more exotic characteristics. The first are voltage- gated ion channels which open and close in response to membrane potential. These are then separated into sodium, calcium, potassium, proton, transient receptor, and cyclic nucleotide-gated channels; each of which is responsible for a unique role. Ligand-gated ion channels are also known as ionotropic receptors, and they open in response to specific ligand molecules binding to the extracellular domain of the receptor protein. The other gated classifications include activation and inactivation by second messengers, inward-rectifier potassium channels, calcium-activated potassium channels, two-pore-domain potassium channels, light-gated channels, mechano-sensitive ion channels and cyclic nucleotide-gated channels. Finally, the other classifications are based on less normal characteristics such as two-pore channels, and transient receptor potential channels (2). Specifically, hyperpolarization-activated cation channels of the HCN gene family contribute to spontaneous rhythmic activity in both the heart and brain (3).

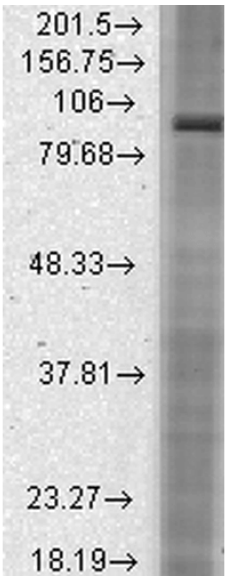
References

1. Hille B. (2001) Ion Channels of Excitable Membranes, 3rd Ed., Sinauer Associated Inc.:Sunderland, MA USA.
2. www.iochannels.org
3. Zong X., et al. (2005) J Biol Chem. 280(40): 34224-34232

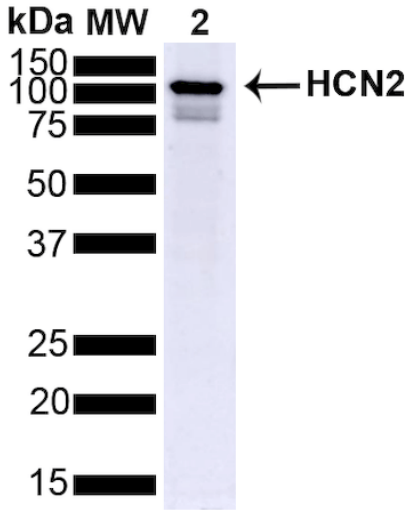
Product Images



Immunohistochemistry analysis using Mouse Anti-HCN2 Monoclonal Antibody, Clone S71 (SMC-305). Tissue: frozen brain section. Species: mouse. Fixation: 10% Formalin Solution for 12-24 hours at RT. Primary Antibody: Mouse Anti-HCN2 Monoclonal Antibody (SMC-305) at 1:1000 for 1 hour at RT. Secondary Antibody: HRP/DAB Detection System: Biotinylated Goat Anti-Mouse, Streptavidin Peroxidase, DAB Chromogen (brown) for 30 minutes at RT. Counterstain: Mayer Hematoxylin (purple/blue) nuclear stain at 250-500 µl for 5 minutes at RT.



Western Blot analysis of Rat brain membrane lysate showing detection of HCN2 protein using Mouse Anti-HCN2 Monoclonal Antibody, Clone S71 (SMC-305). Load: 15 µg. Block: 1.5% BSA for 30 minutes at RT. Primary Antibody: Mouse Anti-HCN2 Monoclonal Antibody (SMC-305) at 1:1000 for 2 hours at RT. Secondary Antibody: Sheep Anti-Mouse IgG: HRP for 1 hour at RT.



Western Blot analysis of Mouse Brain showing detection of ~95 kDa HCN2 protein using Mouse Anti-HCN2 Monoclonal Antibody, Clone S71 (SMC-305). Lane 1: MW Ladder. Lane 2: Mouse Brain (15 ug). Load: 15 ug. Block: 5% Skim Milk powder in TBST. Primary Antibody: Mouse Anti-HCN2 Monoclonal Antibody (SMC-305) at 1:1000 for 2 hours at RT with shaking. Secondary Antibody: Goat anti-mouse IgG:HRP at 1:4000 for 1 hour at RT with shaking. Color Development: Chemiluminescent for HRP (Moss) for 5 min in RT. Predicted/Observed Size: ~95 kDa.

Product Citations (2)

Other Citations

Biomarker Analysis with Grating Coupled Surface Plasmon Coupled Fluorescence.

Mendoza, A., Dias, J.A., Zeltner, T. and Lawrence, D.A. (2014) J Adv Bio & Biotech. 1(1): 1-22.

PubMed ID: N/A **Reactivity** Human **Applications:** Antibody Microarray

Biomarker Analysis with Grating Coupled Surface Plasmon Coupled Fluorescence.

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PubMed ID: N/A **Reactivity** Mouse **Applications:** Antibody Microarray

Reviews

Based on validation through cited publications.

★★★★★

StressMarq Biosciences
January 17, 2017: