

Product datasheet

Anti-HCN1 antibody [S70] ab84816

Recombinant

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Overview

Product name	Anti-HCN1 antibody [S70]
Description	Mouse monoclonal [S70] to HCN1
Host species	Mouse
Specificity	No cross reactivity against HCN2
Tested applications	Suitable for: IHC-P, IHC-Fr, WB, Flow Cyt
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Recombinant fragment within Rat HCN1 aa 750-950 (C terminal). The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please contact our Scientific Support team to discuss your requirements. Database link: Q9JKB0
Positive control	WB: Rat brain lysate. IHC-P: Mouse cerebellum tissue, mouse brain tissue, human brain tissue. ICC: Human hippocampus tissue.
General notes	<p>The clone number has been updated from S70-28 to N70/28, 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. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), PBS

Purity	Protein G purified
Clonality	Monoclonal
Clone number	S70
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab84816 in the following tested applications.

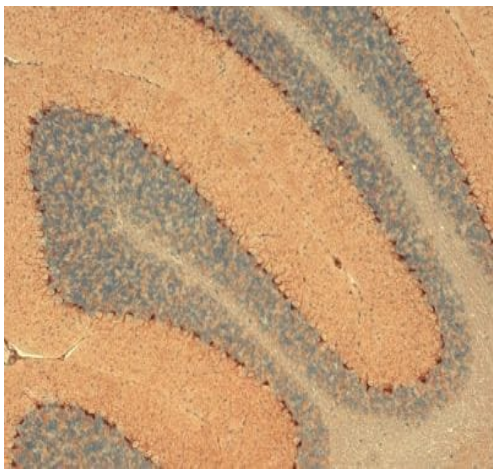
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration.
WB		Use a concentration of 1 - 10 µg/ml. Detects a band of approximately 99 kDa (predicted molecular weight: 99 kDa).
Flow Cyt		Use 1-2µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target

Function	Hyperpolarization-activated ion channel exhibiting weak selectivity for potassium over sodium ions. Contributes to the native pacemaker currents in heart (If) and in neurons (Ih). Activated by cAMP, and at 10-100 times higher concentrations, also by cGMP. May mediate responses to sour stimuli.
Tissue specificity	Detected in brain, in particular in amygdala and hippocampus, while expression in caudate nucleus, corpus callosum, substantia nigra, subthalamic nucleus and thalamus is very low or not detectable. Detected at very low levels in muscle and pancreas.
Sequence similarities	Belongs to the potassium channel HCN family. Contains 1 cyclic nucleotide-binding domain.
Domain	The segment S4 is probably the voltage-sensor and is characterized by a series of positively charged amino acids at every third position.
Cellular localization	Membrane.

Images



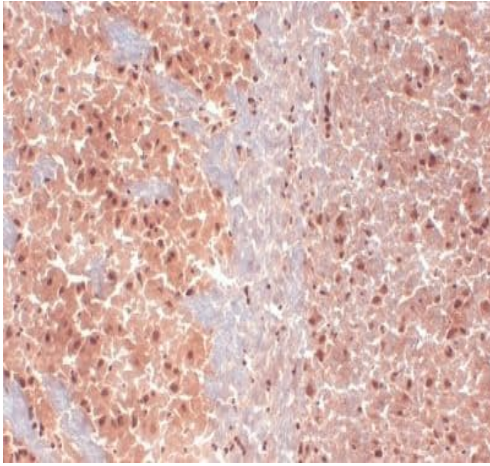
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HCN1 antibody [S70] (ab84816)

Immunohistochemistry analysis of 10% formalin-fixed mouse cerebellum tissue labelling HCN1 with ab84816 at 1/1000 dilution for 1 hour at room temperature, followed by biotinylated Goat Anti-Mouse antibody (brown) for 30 minutes at room temperature. Localization: Cytoplasmic staining of Purkinje cells. Counterstain: Hematoxylin (purple/blue) nuclear stain at 250-500 μ l for 5 minutes at room temperature. HRP/DAB detection.



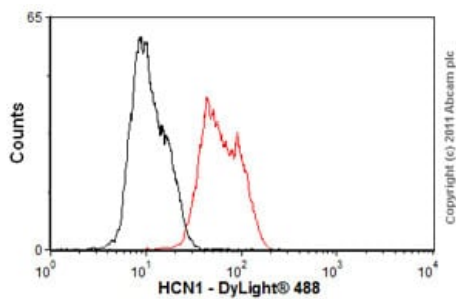
Immunohistochemistry (Frozen sections) - Anti-HCN1 antibody [S70] (ab84816)

Immunohistochemistry analysis of 10% formalin-fixed human frozen brain section labelling HCN1 with ab84816 at 1/1000 dilution for 1 hour at room temperature, followed by biotinylated Goat Anti-Mouse antibody (brown) for 30 minutes at room temperature. Localization: Neurons. Counterstain: Hematoxylin (purple/blue) nuclear stain at 250-500 μ l for 5 minutes at room temperature. HRP/DAB detection.



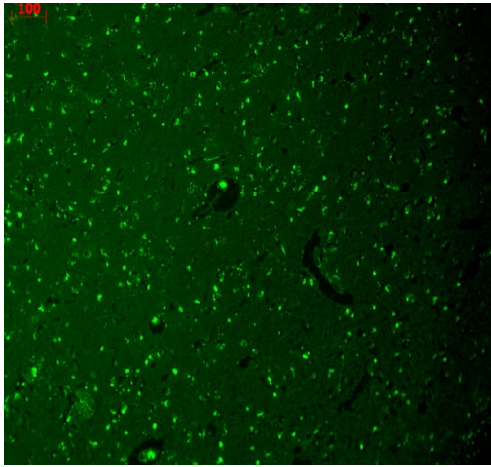
Immunohistochemistry (Frozen sections) - Anti-HCN1 antibody [S70] (ab84816)

Immunohistochemistry analysis of 10% formalin-fixed mouse frozen brain section labelling HCN1 with ab84816 at 1/1000 dilution for 1 hour at room temperature, followed by biotinylated Goat Anti-Mouse antibody (brown) for 30 minutes at room temperature. Counterstain: Hematoxylin (purple/blue) nuclear stain at 250-500 μ l for 5 minutes at room temperature. HRP/DAB detection.



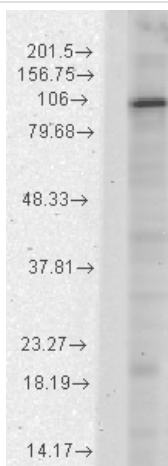
Flow Cytometry - Anti-HCN1 antibody [S70] (ab84816)

Overlay histogram showing SH-SY5Y cells stained with ab84816 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab84816, 1 μ g/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2 μ g/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive result in SH-SY5Y cells fixed with 4% paraformaldehyde (10 min)/permeabilized in 0.1% PBS-Tween for 20 min used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HCN1 antibody [S70] (ab84816)

Immunohistochemical analysis of paraffin-embedded (Bouin's Fixative - picric acid, acetic acid and formaldehyde) human hippocampus tissue labelling HCN1 with ab84816 at 1/1000 dilution, for 1 hour at RT followed by secondary antibody Goat Anti-Mouse (FITC) at 1/50 dilution, for 1 hour at RT. Membrane and cytosolic staining on human hippocampus tissue is observed.



Western blot - Anti-HCN1 antibody [S70] (ab84816)

Anti-HCN1 antibody [S70] (ab84816) at 1/1000 dilution + Rat brain membrane lysates at 15 µg

Secondary

HRP-Sheep Anti-Mouse IgG antibody

Predicted band size: 99 kDa

Observed band size: 99 kDa

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