

Anti-CACNB2 antibody [N8B/1] ab93606

★★★★★ [1 Abreviews](#) [3 References](#) [3 Images](#)

Overview

Product name	Anti-CACNB2 antibody [N8B/1]
Description	Mouse monoclonal [N8B/1] to CACNB2
Host species	Mouse
Specificity	No cross reactivity against CAVB1, CAVB3 and CAVB4
Tested applications	Suitable for: WB, IHC-Fr, IP, IHC-P, ICC/IF, Flow Cyt
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Human heart tissue. Flow Cyt: SH-SY5Y cells. ICC/IF: HaCaT cells. IP: Mouse skeletal muscle lysate.
General notes	<p>The clone number has been updated from S8b-1 to N8B/1, 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 freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	N8B/1
Isotype	IgG1

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab93606 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
WB		Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration.
IP	★★★★★ (1)	Use at an assay dependent concentration.
IHC-P		Use a concentration of 5 µg/ml. Antigen retrieval is not essential but may optimise staining.
ICC/IF		Use a concentration of 1 - 10 µg/ml.
Flow Cyt		Use 1µl for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target

Function

The beta subunit of voltage-dependent calcium channels contributes to the function of the calcium channel by increasing peak calcium current, shifting the voltage dependencies of activation and inactivation, modulating G protein inhibition and controlling the alpha-1 subunit membrane targeting.

Tissue specificity

Expressed in all tissues.

Involvement in disease

Defects in CACNB2 are the cause of Brugada syndrome type 4 (BRS4) [MIM:611876]. BRS4 is a heart disease characterized by the association of Brugada syndrome with shortened QT intervals. Brugada syndrome is a tachyarrhythmia characterized by right bundle branch block and ST segment elevation on an electrocardiogram (ECG). It can cause the ventricles to beat so fast that the blood is prevented from circulating efficiently in the body. When this situation occurs (called ventricular fibrillation), the individual will faint and may die in a few minutes if the heart is not reset.

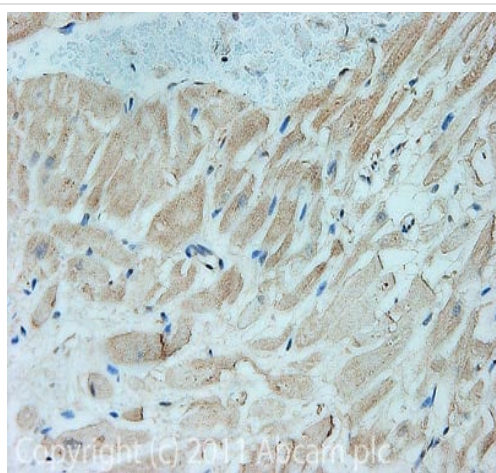
Sequence similarities

Belongs to the calcium channel beta subunit family.
Contains 1 SH3 domain.

Cellular localization

Cell membrane > sarcolemma.

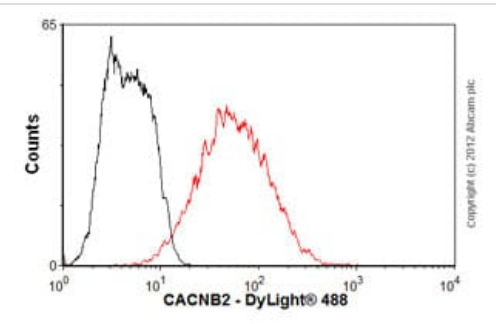
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CACNB2 antibody [N8B/1] (ab93606)

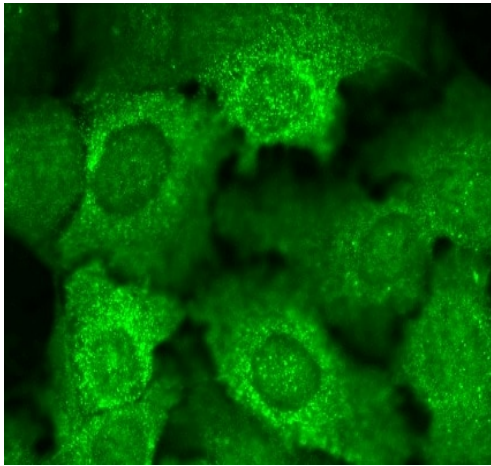
IHC image of ab93606 staining in Human Heart formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab93606, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Flow Cytometry - Anti-CACNB2 antibody [N8B/1] (ab93606)

Overlay histogram showing SH-SY5Y cells stained with ab93606 (red line). The cells were fixed with 4% paraformaldehyde (10 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. The cells were then incubated with the antibody (ab93606, 1µg/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](#), 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in SH-SY5Y cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-CACNB2 antibody [N8B/1] (ab93606)

Cold 100% methanol-fixed HaCaT (human keratinocyte cell line) cells stained for CACNB2 (green) using ab93606 at 1/100 dilution in ICC/IF.

Secondary Antibody: FITC Goat Anti-Mouse at 1/50 dilution for 1 hour at room temperature.

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