


Product datasheet

Anti-CaV1.3 antibody [S48] ab85491

Recombinant

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Overview

Product name	Anti-CaV1.3 antibody [S48]
Description	Mouse monoclonal [S48] to CaV1.3 - N-terminal
Host species	Mouse
Specificity	No cross reactivity against CaV1.2.
Tested applications	Suitable for: IHC-P, Flow Cyt
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Hamster 
Immunogen	Synthetic peptide corresponding to Rat CaV1.3 aa 859-875 (N terminal). Sequence: DNKVTIDDYQEEAEDKD Database link: P27732 Run BLAST with Run BLAST with
Positive control	Rat brain normal tissue lysate - membrane extract (ab29473) can be used as a positive control in WB. Flow Cyt: SH-SY5Y cells. ICC/IF: Human differentiated iPS cells. IHC-P: Mouse backskin tissue. Human hippocampus tissue.
General notes	<p>The clone number has been updated from S48A-9 to L48A/9, 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	S48
Isotype	IgG2a
Light chain type	kappa

Applications

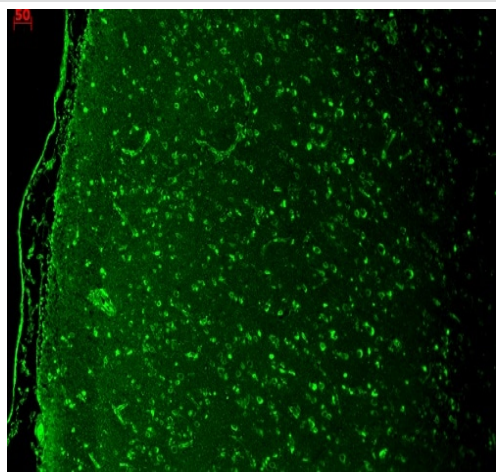
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab85491 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IHC-P		1/100.
Flow Cyt		Use 0.5-1µg for 10 ⁶ cells. ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Target

Function	Voltage-sensitive calcium channels (VSCC) mediate the entry of calcium ions into excitable cells and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division and cell death. The isoform alpha-1D gives rise to L-type calcium currents. Long-lasting (L-type) calcium channels belong to the 'high-voltage activated' (HVA) group. They are blocked by dihydropyridines (DHP), phenylalkylamines, benzothiazepines, and by omega-agatoxin-IIIa (omega-Aga-IIIa). They are however insensitive to omega-conotoxin-GVIA (omega-CTx-GVIA) and omega-agatoxin-IVA (omega-Aga-IVA).
Tissue specificity	Expressed in pancreatic islets and in brain, where it has been seen in cerebral cortex, hippocampus, basal ganglia, habenula and thalamus. Expressed in the small cell lung carcinoma cell line SCC-9. No expression in skeletal muscle.
Sequence similarities	Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. CACNA1D subfamily.
Domain	Each of the four internal repeats contains five hydrophobic transmembrane segments (S1, S2, S3, S5, S6) and one positively charged transmembrane segment (S4). S4 segments probably represent the voltage-sensor and are characterized by a series of positively charged amino acids at every third position.
Cellular localization	Membrane.

Images

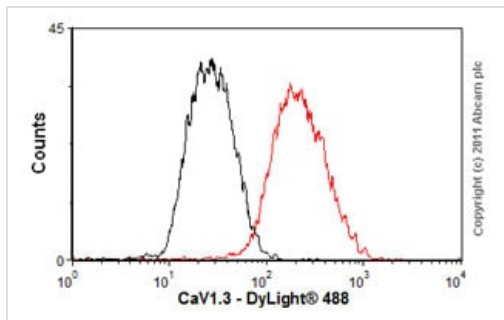


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CaV1.3 antibody [S48] (ab85491)

ab85491 staining CaV1.3 in human hippocampus tissue by IHC-P (Bouin's fixed paraffin embedded tissue sections).

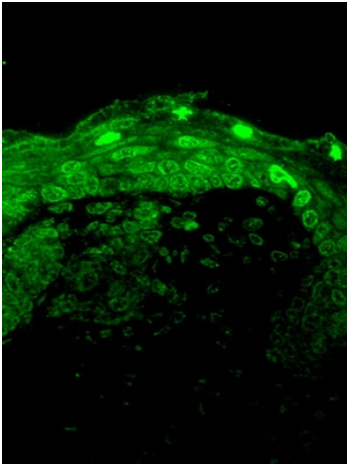
The primary antibody was used at 1:1000 for 1 hour at RT.

Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



Flow Cytometry - Anti-CaV1.3 antibody [S48] (ab85491)

Overlay histogram showing SH-SY5Y (Human neuroblastoma cell line from bone marrow) cells stained with ab85491 (red line). The cells were fixed with 80% methanol (5 minutes) and then permeabilized with 0.1% PBS-Tween for 20 minutes. 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 (ab85491, 0.5 μ g/ 1×10^6 cells) for 30 minutes at 22°C. The secondary antibody used was DyLight[®] 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 minutes at 22°C. Isotype control antibody (black line) was mouse IgG2a [CIGG2A] (**ab91361**, 1 μ g/ 1×10^6 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 minutes)/permeabilized in 0.1% PBS-Tween for 20 minutes used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CaV1.3 antibody [S48] (ab85491)

ab85491 staining CaV1.3 in mouse backskin tissue by IHC-P (Bouin's fixed paraffin embedded tissue sections).

Tissue underwent antigen retrieval using microwave in citrate buffer. The primary antibody was used at 1/100 dilution and then sections were incubated with Fluorophore conjugated goat anti mouse at 1/50 dilution.

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