

### Anti-CACNA1C antibody [S57] ab84814

重组

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#### 概述

产品名称	Anti-CACNA1C抗体[S57]
描述	小鼠单克隆抗体[S57] to CACNA1C
宿主	Mouse
经测试应用	<b>适用于:</b> ICC/IF, IHC-P, WB, Flow Cyt
种属反应性	<b>与反应:</b> Mouse, Human, Recombinant fragment
免疫原	Fusion protein corresponding to Rabbit CACNA1C aa 1500-1750 (C terminal). Database link: <a href="#">P15381</a>
阳性对照	WB: Cell lysates prepared from DHPR alpha 1 transfected CHO cells. IHC-P: Human hippocampus tissue; Mouse brain tissue. ICC/IF: SK-N-BE cells. Flow Cyt: SH-SY5Y cells.
常规说明	The clone number has been updated from S57-46 to L57/46, both clone numbers name the same antibody clone.  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.  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

#### 性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
存储溶液	Preservative: 0.1% Sodium azide Constituents: 50% Glycerol, PBS
纯度	Protein G purified
克隆	单克隆
克隆编号	S57
同种型	IgG1

应用

**The Abpromise guarantee**      **Abpromise™**承诺保证使用ab84814于以下的经测试应用

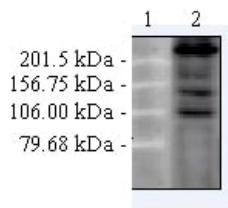
“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
ICC/IF		1/100.
IHC-P		Use a concentration of 0.1 - 10 µg/ml. Use at 0.1-1.0µg/mL (perox), 1.0-10µg/mL (IF).
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 240 kDa. If results are poor, use lysate without boiling, heat at 37°C for 15 minutes.
Flow Cyt		Use 1µg for 10 <sup>6</sup> cells. <b>ab170192</b> - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

靶标

功能	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-1C 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). Calcium channels containing the alpha-1C subunit play an important role in excitation-contraction coupling in the heart. The various isoforms display marked differences in the sensitivity to DHP compounds. Binding of calmodulin or CABP1 at the same regulatory sites results in an opposite effects on the channel function.
组织特异性	Expressed in brain, heart, jejunum, ovary, pancreatic beta-cells and vascular smooth muscle. Overall expression is reduced in atherosclerotic vascular smooth muscle.
疾病相关	Timothy syndrome Brugada syndrome 3
序列相似性	Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. CACNA1C subfamily.
结构域	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.  Binding of intracellular calcium through the EF-hand motif inhibits the opening of the channel.
翻译后修饰	Phosphorylation by PKA activates the channel.
细胞定位	Membrane. Cell membrane. The interaction between RRAD and CACNB2 regulates its trafficking to the cell membrane.

## 图片

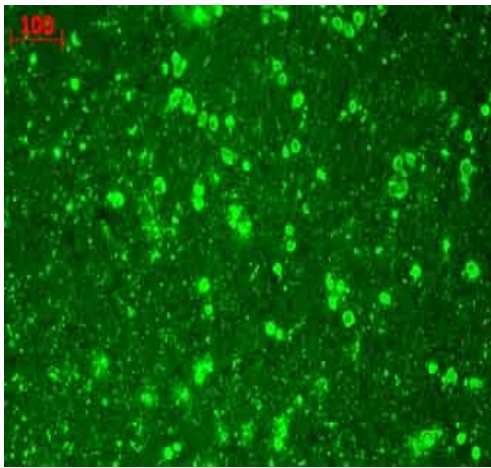


Western blot - Anti-CACNA1C antibody [S57]  
(ab84814)

**All lanes :** Anti-CACNA1C antibody [S57] (ab84814) at 1 µg/ml

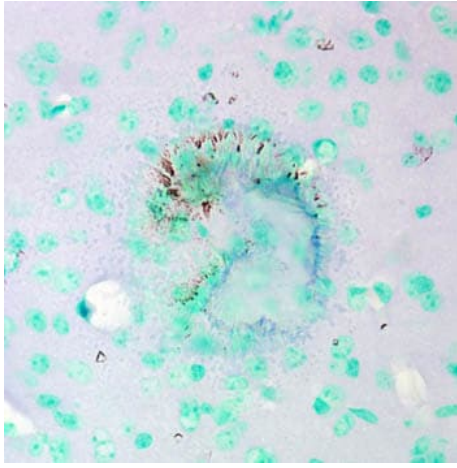
**Lane 1 :** Molecular weight marker

**Lane 2 :** Cell lysates prepared from DHPR alpha 1 transfected CHO cells



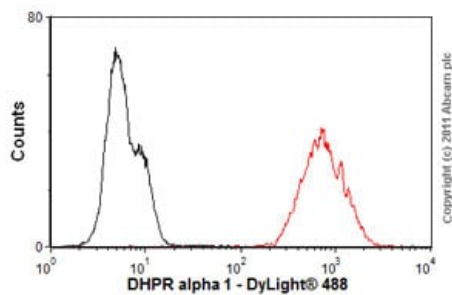
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CACNA1C antibody [S57] (ab84814)

ab84814 staining CACNA1C in human hippocampus tissue section by Immunohistochemistry (Bouin's fixative fixed paraffin embedded tissue sections). Tissue underwent heat mediate fixation in microwave and in citrate buffer. The primary antibody was used at 1/100 dilution. A Fluorophore conjugated goat anti-mouse was used as secondary at 1/50 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CACNA1C antibody [S57] (ab84814)

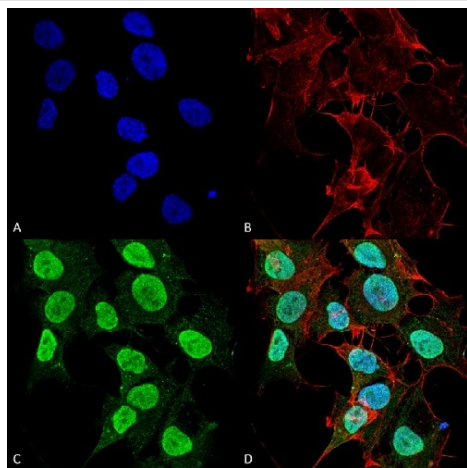
ab84814 staining CACNA1C in mouse brain tissue section by immunohistochemistry (Bouin's fixed paraffin embedded tissue section. Tissue underwent heat mediated fixation in microwave and in citrate buffer. The primary antibody was used at 1/100 dilution. A HRP conjugated secondary was used at 10 dilution.



Flow Cytometry - Anti-CACNA1C antibody [S57] (ab84814)

Overlay histogram showing SH-SY5Y cells stained with ab84814 (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 (ab84814, 1µg/1x10<sup>6</sup> 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 IgG2b [PLPV219] (**ab91366**, 2µg/1x10<sup>6</sup> 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.



Immunocytochemistry/ Immunofluorescence - Anti-CACNA1C antibody [S57] (ab84814)

Formaldehyde-fixed SK-N-BE cells stained for CACNA1C (green) using ab84814 at 1/100 dilution in ICC/IF.

Secondary Antibody: Goat Anti-Mouse ATTO 488 at 1/200 dilution for 60 minutes at room temperature. Counterstain: Phalloidin Texas Red F-Actin stain (A); DAPI (B, blue) nuclear stain at 1/1000, 1/5000 for 60 minutes at room temperature, 5 minutes at room temperature.

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