abcam

Product datasheet

Anti-CACNA1C antibody ab81980

3 References 1 Image

Overview

Product name	Anti-CACNA1C antibody
Description	Goat polyclonal to CACNA1C
Host species	Goat
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Cynomolgus monkey
Immunogen	Synthetic peptide corresponding to Human CACNA1C aa 2201-2213 (C terminal). Sequence: C-RARGRPSEEELQD Run BLAST with Run BLAST with
Positive control	Human Heart and Skeletal Muscle lysates.
General notes	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

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: 0.5% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Purification notes	ab81980 was purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
Clonality	Polyclonal

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab81980 in the following tested applications.

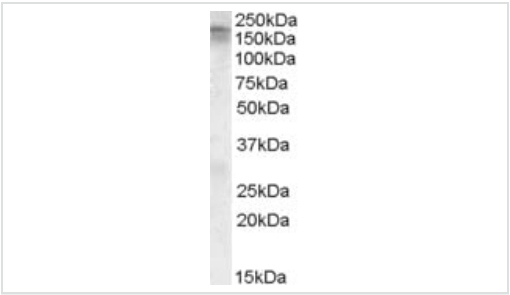
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 0.5 - 1.5 µg/ml. Detects a band of approximately 249 kDa (predicted molecular weight: 249 kDa). 1 hour primary incubation is recommended for this product.

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-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 opposit effects on the channel function.
Tissue specificity	Expressed in brain, heart, jejunum, ovary, pancreatic beta-cells and vascular smooth muscle. Overall expression is reduced in atherosclerotic vascular smooth muscle.
Involvement in disease	Timothy syndrome Brugada syndrome 3
Sequence similarities	Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. CACNA1C 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. Binding of intracellular calcium through the EF-hand motif inhibits the opening of the channel.
Post-translational modifications	Phosphorylation by PKA activates the channel.
Cellular localization	Membrane. Cell membrane. The interaction between RRAD and CACNB2 regulates its trafficking to the cell membrane.

Images



Western blot - Anti-CACNA1C antibody (ab81980)

Anti-CACNA1C antibody (ab81980) at 0.5 µg/ml + Human Heart lysate in RIPA buffer at 35 µg

Predicted band size: 249 kDa
Observed band size: 249 kDa

Primary incubation was 1 hour. Detected by chemiluminescence.

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