


Product datasheet

Anti-CACNA1A antibody ab32642

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

Overview

| | |
|----------------------------|---|
| Product name | Anti-CACNA1A antibody |
| Description | Rabbit polyclonal to CACNA1A |
| Host species | Rabbit |
| Specificity | From Jan 2024, QC testing of replenishment batches of this polyclonal changed. All tested and expected application and reactive species combinations are still covered by our Abcam product promise. However, we no longer test all applications. For more information on a specific batch, please contact our Scientific Support who will be happy to help. |
| Tested applications | Suitable for: WB, IHC-FoFr |
| Species reactivity | Reacts with: Mouse, Rat, Human Predicted to work with: Rabbit, Cow  |
| Immunogen | Synthetic peptide corresponding to Rat CACNA1A aa 1-100 conjugated to keyhole limpet haemocyanin. (Peptide available as ab32641) |
| General notes | <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. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. |
| Storage buffer | pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS |

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our

scientific support team who will be happy to help.

| | |
|------------------|-----------------------------|
| Purity | Immunogen affinity purified |
| Clonality | Polyclonal |
| Isotype | IgG |

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab32642 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. Predicted molecular weight: 282 kDa. |
| IHC-FoFr | ★★★★★ (1) | 1/100. |

Target

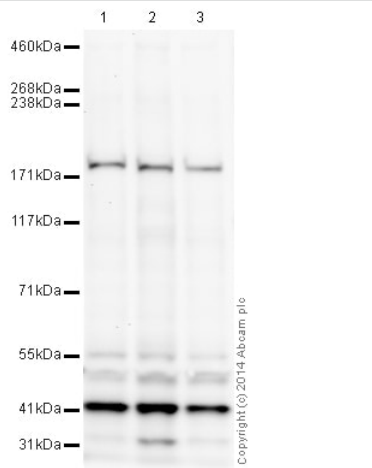
Relevance

Cav2.1 is a voltage-sensitive calcium channels (VSCC) which belongs to the calcium channel alpha-1 subunit family. Cav2.1 mediates the entry of calcium ions into excitable cells and is 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. Cav2.1 (isoform alpha-1A) gives rise to P and/or Q-type calcium currents. Voltage-dependent calcium channels are multisubunit complexes, consisting of alpha-1, alpha-2, beta and delta subunits in a 1:1:1:1 ratio. The channel activity is directed by the pore-forming and voltage-sensitive alpha-1 subunit. In many cases, this subunit is sufficient to generate voltage-sensitive calcium channel activity. The auxiliary subunits beta and alpha-2/delta linked by a disulfide bridge regulate the channel activity.

Cellular localization

Cell Membrane

Images



Western blot - Anti-CACNA1A antibody (ab32642)

All lanes : Anti-CACNA1A antibody (ab32642) at 1 µg/ml

Lane 1 : E16 Rat Embryo Brain - Tissue Lysate

Lane 2 : E16 Mouse Embryo Brain - Tissue Lysate

Lane 3 : E18 Rat Embryo Brain - Tissue Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

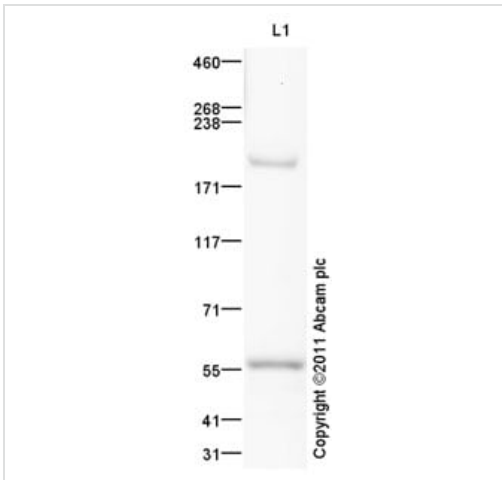
Predicted band size: 282 kDa

Observed band size: 190 kDa

Additional bands at: 42 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 8 minutes

This blot was produced using a 3-8% Tris Acetate gel under the TA buffer system. The gel was run at 150V for 60 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 5% Bovine Serum Albumin before being incubated with ab32642 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution.



Western blot - Anti-CACNA1A antibody (ab32642)

Anti-CACNA1A antibody (ab32642) at 1 µg/ml + Cerebellum Rat Tissue Lysate at 20 µg

Secondary

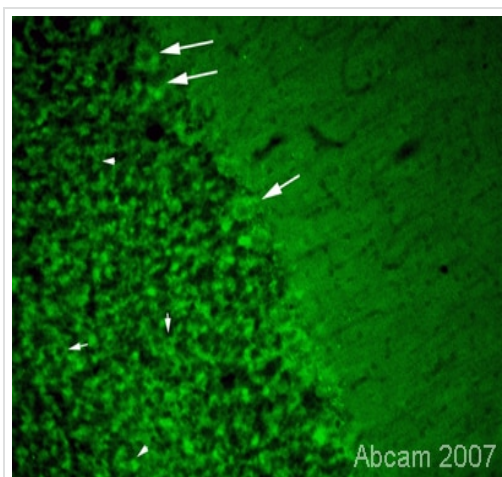
Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at 1/5000 dilution

Predicted band size: 282 kDa

Observed band size: 190 kDa

Additional bands at: 56 kDa. We are unsure as to the identity of these extra bands.

Abcam recommends using milk as the blocking agent. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.



Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-CACNA1A antibody (ab32642)

This image is courtesy of Sophie Pezet, Laboratoire de Neurobiologie, Paris, France

Immunofluorescent staining for CACNA1A using Rabbit polyclonal to CACNA1A (ab32642) in rat Purkinje (arrows) and granular (arrow heads) cells, of the rat cerebellum. Protocol details: Rats were intracardially perfused with 4% paraformaldehyde. Whole brain tissue was post-fixed overnight in the same fixative, and cryoprotected in 20% sucrose and frozen in OCT. 30µm coronal sections were cut by cyrostat for use in free floating IHC. Primary antibody ab32642 was incubated overnight at 1/3000 at room temperature. Secondary antibody Alexa fluor 488 1/3000 was incubated for 2 hours at room temperature.

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