

Product Datasheet

Cav1.3 Antibody (RPE) (orb148183)

Catalog Number orb148183

Category Antibodies

Description Mouse monoclonal to CaV1 (RPE). 3. Ion channels are integral membrane proteins that help establish and control the small voltage gradient across the plasma membrane of living cells by allowing the flow of ions down their electrochemical gradient. They are present in the membranes that surround all biological cells because their main function is to regulate the flow of ions across this membrane. Whereas some ion channels permit the passage of ions based on charge, others conduct based on a ionic species, such as sodium or potassium. Furthermore, in some ion channels, the passage is governed by a gate which is controlled by chemical or electrical signals, temperature, or mechanical forces. There are a few main classifications of gated ion channels. There are voltage- gated ion channels, ligand-gated, other gating systems and finally those that are classified differently, having more exotic characteristics. The first are voltage- gated ion channels which open and close in response to membrane potential. These are then separated into sodium, calcium, potassium, proton, transient receptor, and cyclic nucleotide-gated channels; each of which is responsible for a unique role. Ligand-gated ion channels are also known as ionotropic receptors, and they open in response to specific ligand molecules binding to the extracellular domain of the receptor protein. The other gated classifications include activation and inactivation by second messengers, inward-rectifier potassium channels, calcium-activated potassium channels, two-pore-domain potassium channels, light-gated channels, mechano-sensitive ion channels and cyclic nucleotide-gated channels. Finally, the other classifications are based on less normal characteristics such as two-pore channels, and transient receptor potential channels. Specifically, CaV1. 3, also known as the calcium channel, voltage-dependent, L type, alpha 1D subunit (CACNA1D), is a human gene. CaV1. 3 subunits are primarily expressed in neurons and neuroendocrine cells. Some studies suggest however that CaV1. 3 is also found in the atria, and may figure prominently in atrial arrhythmias. CaV1. 3 also carries the primary sensory receptors of the mammalian cochlea, and are also expressed in the electromotile outer hair cells..

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|-----------------------------|--|
| Target | Cav1.3 |
| Clonality | Recombinant |
| Species/Host | Mouse |
| Isotype | IgG2a Kappa |
| Conjugation | RPE |
| Reactivity | Human, Mouse, Rat |
| Concentration | 1 mg/ml |
| Buffer/Preservatives | 95.46mM Phosphate, 2.48mM MES and 2mM EDTA |
| Purification | Protein G Purified |
| Immunogen | Fusion protein amino acids 859-875 of rat Cav1.3 |
| UniProt ID | P27732 |
| MW | 250kDa |
| Tested applications | AM, ICC, IF, IHC, IP, WB |
| Dilution range | WB (1:1000), IHC (1:1000), ICC/IF (1:100) |
| Application notes | 1 µg/ml was sufficient for detection of Cav1.3 in 10 µg of rat brain lysate by colorimetric immunoblot analysis using Goat anti-mouse IgG:HRP as the secondary antibody. |
| Specificity | Detects ~250kDa. No cross-reactivity against Cav1.2. |
| Antibody Type | Recombinant Antibody |
| Clone Number | S48 |
| Storage | Conjugated antibodies should be stored according to the product label |
| Note | For research use only |

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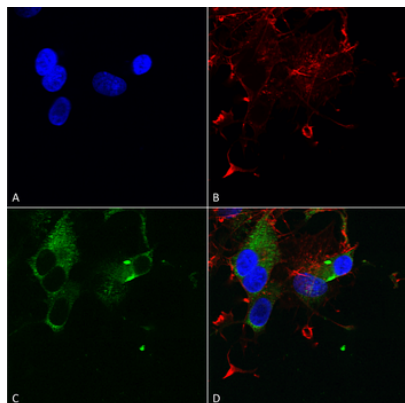
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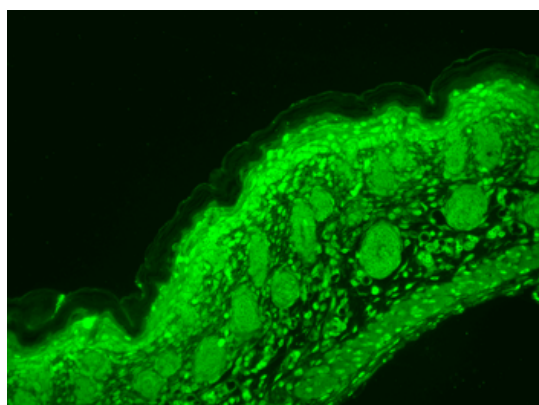
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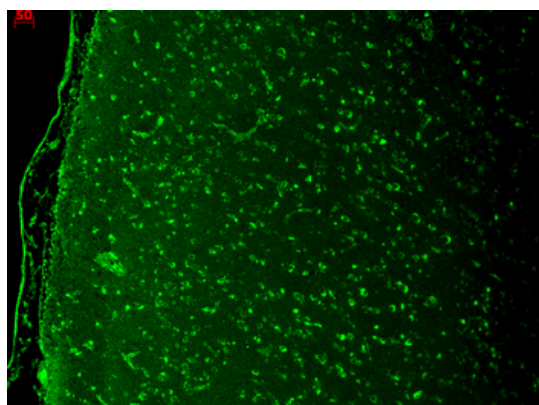
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Entrez 29716**NCBI** NP_058994.1**Expiration Date** 12 months from date of receipt.

Immunocytochemistry/Immunofluorescence analysis using Mouse Anti-Cav1.3 Monoclonal Antibody, Clone S48. Tissue: Neuroblastoma cells (SH-SY5Y). Species: Human. Fixation: 4% PFA for 15 min. Primary Antibody: Mouse Anti-Cav1.3 Monoclonal Antibody at 1:50 for overnight at 4°C with slow rocking. Secondary Antibody: AlexaFluor 488 at 1:1000 for 1 hour at RT. Counterstain: Phalloidin-iFluor 647 (red) F-Actin stain; Hoechst (blue) nuclear stain at 1:800, 1.6mM for 20 min at RT. (A) Hoechst (blue) nuclear stain. (B) Phalloidin-iFluor 647 (red) F-Actin stain. (C) Cav1.3 Antibody (D) Composite.



Immunohistochemistry analysis using Mouse Anti-CaV1.3 Calcium Channel Monoclonal Antibody, Clone S48. Tissue: backskin. Species: Mouse. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-CaV1.3 Calcium Channel Monoclonal Antibody at 1:100 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.



Immunohistochemistry analysis using Mouse Anti-CaV1.3 Calcium Channel Monoclonal Antibody, Clone S48. Tissue: hippocampus. Species: Human. Fixation: Bouin's Fixative and paraffin-embedded. Primary Antibody: Mouse Anti-CaV1.3 Calcium Channel Monoclonal Antibody at 1:1000 for 1 hour at RT. Secondary Antibody: FITC Goat Anti-Mouse (green) at 1:50 for 1 hour at RT.

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