

L-type Ca^{2+} channel (Cav1.2) (pSer1928) pAb

Quality Control Certificate of Analysis

Catalogue No.:A010-70

Unit Size: 50 μ l

Lot No: A642222

Background: The L-type Ca^{2+} channel (LTCC, or Cav1.2 or dihydropyridine receptor) is a voltage gated Ca^{2+} channel of the plasma membrane in brain and heart, which is responsible for the influx of Ca^{2+} to initiate neurotransmitter release (in neurones) or muscle contraction (in cardiac muscle). The channel is controlled by a number of chemical influences including phosphorylation on Ser-1928 by PKA (De Jongh et al. (1996)) which enhances ion channel activity. Ser-1928 from rabbit, is conserved across all mammalian species and is thought to be phosphorylated in response to elevated cAMP in these species.

Description: Lyophilised **Rabbit** polyclonal anti-serum (A010-70) containing IgG antibody specific for Cav1.2 Phospho Ser-1928 (PKA site).

Immunogen: Synthetic peptide (LGRRAS(PO₃H₂)FHLE₁₉₃₂) corresponding to amino acids surrounding the phosphorylated serine residue at position 1928 of $\alpha 1c$ subunit of Cav1.2 from rabbit conjugated to KLH.

Antibody Isotype: IgG.

Antibody Purity: Raw Serum.

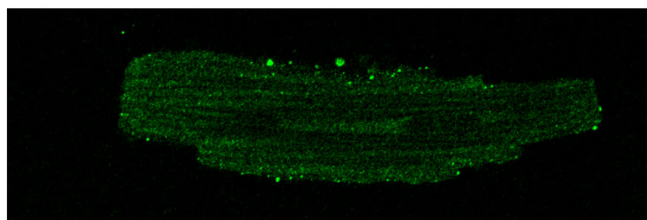
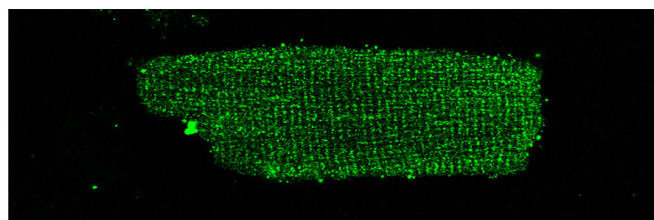
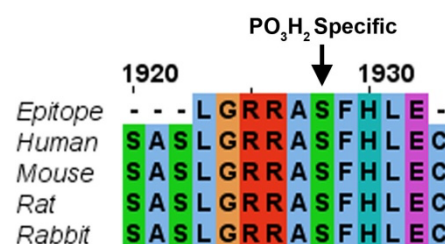
Species Cross Reactivity: The epitope peptide sequence from rabbit Cav1.2 $\alpha 1c$ corresponds exactly to the equivalent region in Human, mouse and rat. However, each of these possess multiple isoforms of the polypeptide resulting in different residue numbers for the equivalent site.

Specificity: The epitope peptide aligns exactly to Human Cav1.2 $\alpha 1c$ isoforms 1-23 (See website - Ep/Is alignment). The antibody has been shown to recognise phosphorylated serine-1928 of rat Cav1.2 ($\alpha 1c$), and binding is blocked in the presence of a peptide containing the Phospho Ser-1928 epitope.

Vial Constituents: Lyophilised A010-70 Rabbit anti-serum (50 µl)

Storage Instructions: Lyophilised antibody is stable at 4°C when stored with desiccant. Reconstitute lyophilised powder in 50 µl of 18 MΩ H₂O, aliquot and store frozen at -80°C for 1 year. Avoid freeze - thaw cycles.

Tested Applications: IHC microscopy: 1:100



+ 3μM peptide

IHC Microscopy using 1:100 Cav1.2 Phospho Ser-1928 anti-serum (A010-70) against Rat cardiac myocytes stimulated electrically at 0.5Hz and chemically with β 1-adrenergic agonist (100nM isoproterenol + 100nM ICI118551) for 5 minutes. Cells were fixed in 4% formaldehyde for 30min, washed in PBS (3 times) and permeabilised using 0.1% Triton X-100 in PBS. Cells were blocked with donkey serum, and incubated with 1:100 anti-Cav1.2 phospho-Ser1928 antibody (A010-70) +/- 3 μ M epitope peptide for 60min at room temperature. Cells were washed 3 times in PBS and incubated with 1:500 Alexa Fluor donkey anti-rabbit IgG for 2 hours. Cells were washed (3xPBS) and mounted on a slide and viewed under a confocal fluorescence microscope under oil immersion.

Related Products: Cav1.2 Phospho Ser-1928 epitope peptide (P010-70)

Background References:

- De Jongh, K.S., Murphy, B.J., Colvin, A.A., Hell, J.W., Takahashi, M. & Catterall, W.A. (1996) *Biochemistry* 35, 10392-402