



**Badrilla**, Leeds Innovation Centre, 103  
Clarendon Road, Leeds LS2 9DF, UK

Tel: +44-(0)1937-572179  
Fax: +44-(0)1937-573168  
e-mail: info@badrilla.com

### A010-70 anti-Cav1.2 phospho-Ser1928 50µl

**Background:** The L-type Ca<sup>2+</sup>-channel (LTCC, or Cav1.2 or dihydropyridine receptor) is a voltage gated Ca<sup>2+</sup>-channel of the plasma membrane in brain and heart, which is responsible for the influx of Ca<sup>2+</sup> 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 (rabbit sequence) is conserved across all mammalian species (below) and is thought to be phosphorylated in response to elevated cAMP in these species.

**Description:** Lyophilised rabbit polyclonal serum containing IgG antibody specific to Cav1.2 phospho-Ser1928 (PKA site).

**Immunogen:** Synthetic peptide (LGRRAS(PO<sub>3</sub>H<sub>2</sub>)FHLE<sub>1932</sub>) corresponding to amino acids surrounding the phosphorylated serine residue at position 1928 of α1c subunit of Cav1.2 (rabbit). Sequence corresponds exactly to the equivalent Ser residue in α1c from human, mouse, and rat, however each of these possess multiple isoforms of the polypeptide resulting in different residue numbers for the equivalent site.

**Specificity and Species Cross Reactivity:** The antibody recognises phosphorylated serine 1928 of rat Cav1.2 (α1c) and binding is blocked in the presence of a peptide containing the phospho-Ser1928 epitope.

**Applications:** Immunofluorescence microscopy (1:100)

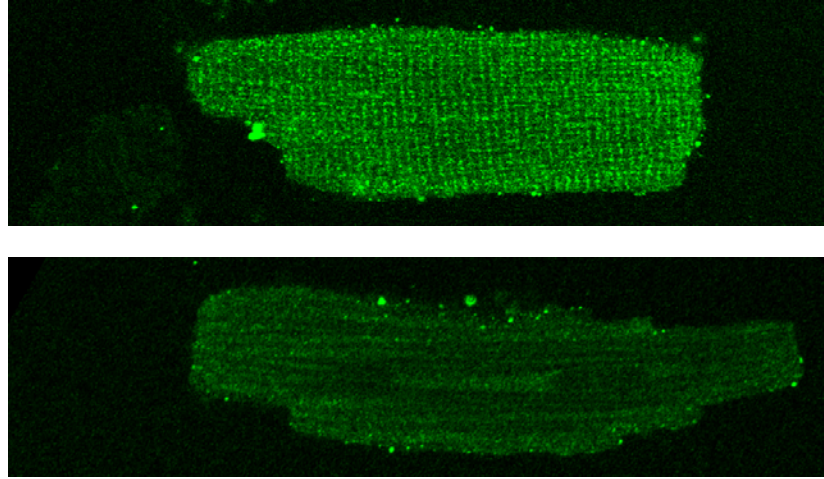
**Storage:** Store antibody desiccated at 4C when dry, and frozen (-20C or -80C) in small aliquots when reconstituted with 50µl deionised water.

#### Epitope sequence alignment Cav1.2 (1923-1932 rabbit)

Epitope	LGRRAS <sup>S</sup> FHLE
Human	LGRRASFHLE-1985 (multiple isoforms ⇒ various residue Nos.)
Mouse	LGRRASFHLE-1901 (multiple isoforms ⇒ various residue Nos.)
Rabbit	LGRRASFHLE-1932
Rat	LGRRASFHLE-1932 (multiple isoforms ⇒ various residue Nos.)

#### references:

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



**Figure 1: Detection of Cav1.2 phosphorylated at Ser1928 in rat cardiac myocytes** Rat cardiac myocytes were stimulated electrically (0.5Hz) and with  $\beta$ 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 in 0.1% Triton X-100 in PBS. Non-specific binding sites were blocked with donkey serum, and cells were incubated with anti-Cav1.2 phospho-Ser1928 antibody (A010-70: top) at 1:100 dilution in the absence or presence of 3 $\mu$ M epitope peptide (P010-70: bottom) for 60min at room temperature. Cells were washed 3 times in PBS and incubated with fluorescently labelled secondary antibody (Alexa Fluor donkey anti-rabbit IgG, 1:500) for 2 hours. Cells were washed (3xPBS) and mounted on a slide and viewed under a confocal fluorescence microscope under oil immersion.