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Ryanodine Receptor 2 (RYR2) (dephoSer2808) pAb serum

Quality Control Certificate of Analysis
Catalogue No.:A010-35AP
Unit Size: 100 µl
Lot No.: 642126

Background: The ryanodine receptor (RyR2) is a Ca^{2+} channel of cardiac muscle that plays a central role in EC coupling. The binding of Ca^{2+} to RyR2 opens the channel and Ca^{2+} stored in the SR moves through the channel into the cytosol to initiate muscle contraction (Bers, 2002). Abnormal structure and function of ryanodine receptors has been reported in failing hearts, with Ser-2809 phosphorylation appearing elevated in clinical situations which may contribute to the abnormal Ca^{2+} handling characteristics of cardiac muscle in these conditions (Wehrens and Marks, 2003). Serine-2809 can be phosphorylated by PKA or CaMKII (Rodriguez *et al*., 2003), which is coincident with significant change in RyR2 channel function typified by an increased open probability (Witcher *et al*., 1991; Valdivia *et al*., 1995; Marx *et al*., 2000), the abrogation of the inhibitory effects of CaM (Witcher *et al*., 1991) and Mg^{2+} (Hain *et al*., 1995), dissociation of regulatory factors, expression of subconductance states and the expression of channel activity at diastolic Ca^{2+} concentrations (Marx *et al*., 2000). This antibody recognises Dephosphorylated Ser-2808 (human sequence) or Ser-2809 from rabbit.

Description: Affinity purified **Rabbit** polyclonal antibody (A010-35) to dephosphorylated ryanodine receptor Ser-2809.

Immunogen: Synthetic peptide (Y_{2802}NRTRRISQT$_{2811}$) corresponding to amino acids surrounding the dephosphorylated serine residue at position 2808 of RyR2, which was conjugated to keyhole limpet hemocyanin (KLH) by carbodiimide cross linkage.

Antibody Isotype: IgG.

Antibody Purity: Protein A Affinity Purified.

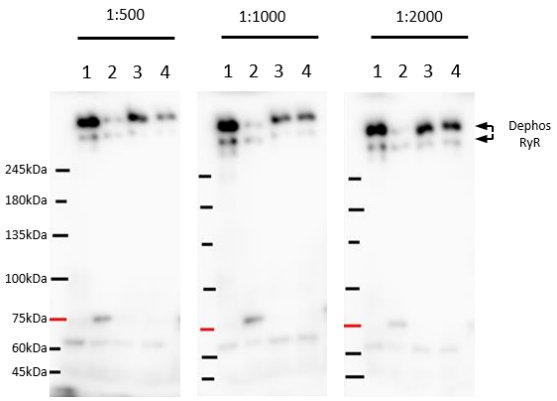
Specificity: The antibody recognises dephosphorylated Serine-2808 of the ryanodine receptor. Binding of the antibody to its target epitope is blocked in the presence of a phosphopeptide containing the dephospho Ser-2808 epitope.

Species Cross Reactivity: Reacts with dephos Ser-2808 of phospholamban from canine, rat and sheep species.

Vial Constituents: Lyophilised affinity purified A010-35AP Ab (100 µl) in 0.1M Tris-citrate pH 7.4 with 20%v/v stabiliser solution.

Storage Instructions: Lyophilised antibody is stable at 4°C when stored with desiccant. Reconstitute lyophilised powder in 100 µl of 18 MΩ H_2O, aliquot and store frozen at -80°C for 1 year. Avoid freeze - thaw cycles.

Tested Applications: **WB 1:500.** Not yet tested in other applications, therefore, optimal dilutions/concentrations should be determined by the user.



Detection of De-phosphorylated RyR (pSer-2808) Species Using Badrilla antibody A010-35AP (Lot 642126)
Canine cardiac sarcoplasmic reticulum (CSR; 5ug) was phosphorylated for 5 minutes in the presence of either purified catalytic subunit of PKA and ATP-γ-S or Calmodulin and ATP-γ-S; Ln 1, Control - minus ATP-γ-S and cPKA; Ln 2 - plus ATP-γ-S (0.2mM) and cPKA (5%); Ln 3 - Control, minus ATP-γ-S and Calmodulin; Ln 4 - plus ATP-γ-S (0.2mM) and Calmodulin (0.04 mg/mL).

A010-35AP, Lot 642126 used at dilutions shown in image.
SDS PAGE on 6% Gels; Blot developed on Syngene G:Box digital imaging system (3m exposure).

Related Products: RYR2 pSer-2809 pAb (A010-30AP), RYR2 pSer2814 pAb(A010-31AP), RYR2 pSer2030 pAb(A01032AP).

Background References:

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