Anti-Phospho-Ser^{295} Xin Actin-Binding Repeat-Containing Protein1 (XIRP1) Antibody

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www.phosphosolutions.com
orders@phosphosolutions.com
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Catalog #: p2400-295 **Size:** 100 µl

Host	Applications	Species Tested	Species Reactivity*	Molecular Reference
Rabbit	WB 1:1000	M	C, H, NHP, R	~150 kDa and ~250 kDa

Product Description: Affinity purified rabbit polyclonal antibody.

Biological Significance: XIRP1 is a member of the Xin family of proteins, containing 16 Xin repeats. The intercalated disk protein Xin protects actin filaments from depolymerization, and is able to bundle actin filaments to interact with β-catenin, which is thought to stabilize actin-based cytoskeletons (Choi et al., 2007). The evolutionary emergence of the Xin paralogs may have played a key role in the development of heart chambers with complete endothelial and myocardial layers (Grosskurth et al., 2008). Loss of mXinα (mouse Xin homolog) results in cardiac hypertrophy and cardiomyopathy (Gustafson-Wagner et al., 2007). Phosphorylation of Ser295 is plays a key role in XIRP1 signaling, and therefore in cardiac hypertrophy, as it has been shown that acute pressure-overloaded hearts rapidly increased phosphorylation at the Ser295 residue of XIRP1. (Chang et al., 2013).

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser^{295} of mouse XIRP1.

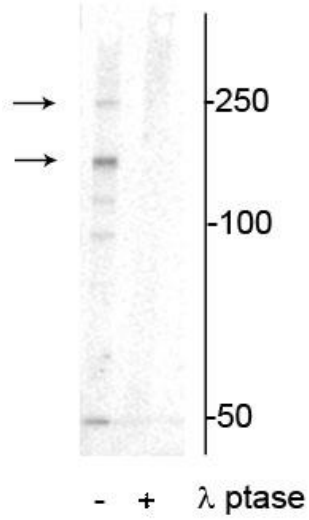
Antibody Specificity: Specific for endogenous levels of the ~250 kDa and ~150 kDa splice variants of XIRP1 phosphorylated at Ser^{295}. Immunolabeling is completely eliminated by treatment with λ-Ptase.

Purification Method: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.

Quality Control Tests: Western blots performed on each lot.

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: Shipped on blue ice. Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.



Western blot of mouse heart lysate showing specific immunolabeling of the ~250 kDa and ~150 kDa splice variants of the XIRP1 protein phosphorylated at Ser^{295} in lane one (-). Phosphospecificity is shown in the second lane (+) where the immunolabeling is completely eliminated by blot treatment with *lambda* phosphatase (λ-Ptase, 1200 units for 30 minutes).

Application Key: WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation
Species Reactivity Key: All-All Species **A**-Avian **Amp**-Amphibian **Ar**-*Arabidopsis* **B**-Bovine **C**-Canine **Ch**-Chicken **D**-*Drosophilia* **GP**-Guinea Pig **H**-Human **Ha**-Hamster **M**-Mouse **NHP**- Non-human primate **P**-Pig **R**-Rat **S**-Sheep **X**-*Xenopus* **Z**-Zebrafish
*Species assumed based on 100% homology with sequence used as antigen **For Research Use Only**

Product Specific References:

Chang, Y. W., Chang, Y. T., Wang, Q., Lin, J. J. C., Chen, Y. J., & Chen, C. C. (2013). Quantitative phosphoproteomic study of pressure-overloaded mouse heart reveals dynamin-related protein 1 as a modulator of cardiac hypertrophy. *Molecular & Cellular Proteomics*, *12*(11), 3094-3107.

General References:

Choi S, Gustafson-Wagner EA, Wang Q, Harlan SM, Sinn HW, Lin J.L.-C., Lin, J.J.-C. The Intercalated Disc Protein, mXinα, Is Capable of Interacting with β-Catenin and Bundling Actin Filaments. J Biol Chem. 2007; 282(49):36024-36036**.**

Gustafson-Wagner EA, Sinn H.W., Chen Y.-L., Wang D.-Z., Reiter R.S., Lin J.L.-C., Yang B., Williamson R.A., Chen J., Lin C.-I., Lin J.J.-C. Loss of mXinalpha, an intercalated disk protein, results in cardiac hypertrophy and cardiomyopathy with conduction defects. (2007) Am J Physiol Heart Circ Physiol, November; 293(5): H2680-H2692.

Grosskurth SE, Bhattacharya D, Wang Q, Lin J.J.-C. Emergence of Xin Demarcates a Key Innovation in Heart Evolution. (2008) PLoS One. Aug; 3(8):e2857.

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