



PhosphoSolutions®
Antibodies that work™

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Anti-Phospho-Ser³⁶⁸ Connexin43

Catalog Number: p1007-368

Size: 100 µl

Product Description: Affinity purified rabbit polyclonal antibody

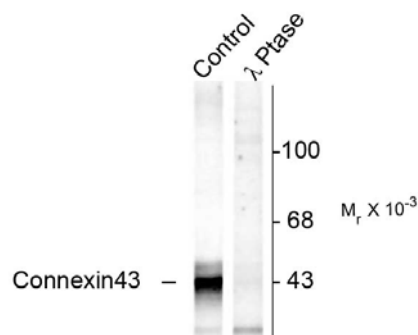
Applications: WB: 1:1000

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser³⁶⁸ of rat connexin43.

Species reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, chicken, guinea pig, human, mouse and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: Gap junctional intercellular communication is thought to play a key role in development and may also be involved in epilepsy (Aronica et al., 2001). Connexin43 forms gap-junctional channels and regulates the permeability of these gap junctions to small organic molecules. Permeability of connexin43 is known to be regulated by phosphorylation at Ser³⁶⁸ by protein kinase C (Yogo et al., 2002; Bao et al., 2004a). Phosphorylation of Ser³⁶⁸ by PKC induces a conformational change of connexin43 that results in a decrease in gap junction permeability (Bao et al., 2004b).

Anti-Phospho-Ser³⁶⁸ Connexin43



Western blot of rat hippocampal lysate showing specific immunolabeling of the ~43k connexin43 phosphorylated at Ser³⁶⁸ (Control). The phosphospecificity of this labeling is shown in the second lane (*lambda*-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the phospho-Ser³⁶⁸ connexin43 antibody. The immunolabeling of connexin43 is completely eliminated by treatment with λ-Ptase.

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WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability: Store at -20°C; stable for at least one year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice.

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

Antibody Specificity: Specific for the ~43k connexin43 protein phosphorylated at Ser³⁶⁸. Immunolabeling is blocked by λ -phosphatase treatment.

Quality Control Tests: Western blots performed on each lot.

References:

- Aronica E, Gorter JA, Jansen GH, Leenstra S, Yankaya B, Troost D (2001) Expression of connexin 43 and connexin 32 gap-junction proteins in epilepsy-associated brain tumors and in the perilesional epileptic cortex. *Acta Neuropathol (Berl)* 101:449-459.
- Bao X, Altenberg GA, Reuss L (2004a) Mechanism of regulation of the gap junction protein connexin 43 by protein kinase C-mediated phosphorylation. *Am J Physiol Cell Physiol* 286:C647-C654.
- Bao X, Reuss L, Altenberg GA (2004b) Regulation of purified and reconstituted connexin 43 hemichannels by protein kinase C-mediated phosphorylation of Serine 368. *J Biol Chem* 279:20058-20066.
- Yogo K, Ogawa T, Akiyama M, Ishida N, Takeya T (2002) Identification and functional analysis of novel phosphorylation sites in Cx43 in rat primary granulosa cells. *FEBS Lett* 531:132-136.

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