

PRODUCT INFORMATION



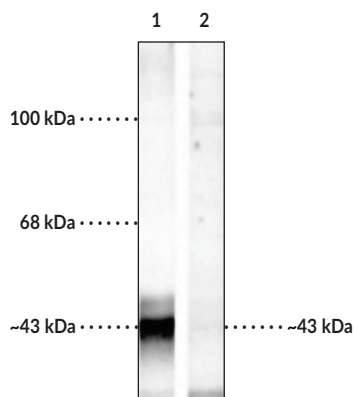
Connexin43 (Phospho-Ser³⁶⁸) Polyclonal Antibody

Item No. 29258

Overview and Properties

Contents: This vial contains 100 µl of affinity-purified polyclonal antibody from pooled serum.
Synonyms: Cx43, Gap Junction Protein α1, GJA1
Immunogen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser³⁶⁸ of rat connexin43
Molecular Weight: ~43 kDa
Species Reactivity: (+) Mouse, rat
Storage: -20°C (as supplied)
Stability: ≥1 year
Storage Buffer: 10 mM HEPES, pH 7.5, with 150 mM sodium chloride, 100 µg/ml BSA, and 50% glycerol
Host: Rabbit
Applications: Western blot (WB); the recommended starting dilution is 1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: Connexin43 (Phospho-Ser³⁶⁸) Polyclonal Antibody
Lane 2: Lysate treatment with λ phosphatase

WB of rat hippocampal lysate showing specific immunolabeling of the ~43 kDa Connexin43 (Phospho-Ser³⁶⁸) Polyclonal Antibody in Lane 1. Phosphospecificity is shown in Lane 2 where immunolabeling is completely eliminated by lysate treatment with λ phosphatase (800 units/1 mg protein for 30 min).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Connexin43 (Cx43) is a membrane protein and member of the connexin family that is encoded by GJA1 in humans.^{1,2} It is widely expressed across various tissues, including heart, brain, and retina, and exhibits plasma membrane localization. Cx43 is a monomeric component of connexons, homo- or heterohexamers that form hydrophilic pores and facilitate the exchange of ions and secondary messengers between the cytoplasm of connected cells at gap junctions. It is essential to cardiomyocyte function and cardiac development, osteoblast and osteocyte survival, and spermatogenesis.¹ Cx43 is also expressed in various tumor cells, including liver, prostate, and breast, and exhibits tumor-specific pro- or anti-metastatic effects.^{1,3} The C-terminus of Cx43 is subject to various post-translational modifications, including phosphorylation. Phosphorylation of Cx43 at position 386 (phospho-Ser³⁶⁸) is mediated by protein kinase C (PKC) and p38 MAPK.^{4,5} PKC-mediated phosphorylation of Cx43 is increased in a mouse model of acute respiratory distress syndrome (ARDS).⁴ IL-1 β increases p38 MAPK-mediated phosphorylation of Cx43 at Ser368 in a perfused rat heart model of myocarditis.⁵ Cayman's Connexin43 (Phospho-Ser³⁶⁸) Polyclonal Antibody can be used for Western blot (WB) applications. The antibody recognizes connexin43 (phospho-Ser³⁶⁸) at approximately 43 kDa from mouse and rat samples.

References

1. Prakoura, N., Kavvadas, P., and Chadjichristos, C.E. Connexin 43: A new therapeutic target against chronic kidney disease? *Cell. Physiol. Biochem.* **49(3)**, 998-1009 (2018).
2. Schulz, R., Görge, P.M., Görbe, A., *et al.* Connexin 43 is an emerging therapeutic target in ischemia/reperfusion injury, cardioprotection and neuroprotection. *Pharmacol. Ther.* **153**, 90-106 (2015).
3. Li, Z., Zhou, Z., Welch, D.R., *et al.* Expressing connexin 43 in breast cancer cells reduces their metastasis to lungs. *Clin. Exp. Metastasis* **25(8)**, 893-901 (2008).
4. Liu, T., Li, Y., Zhang, B., *et al.* The role of phosphorylated Cx43 on PKC mediated Ser368 in lung injury induced by seawater inhalation. *Inflammation* **38(5)**, 1847-1854 (2015).
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