

PRODUCT INFORMATION



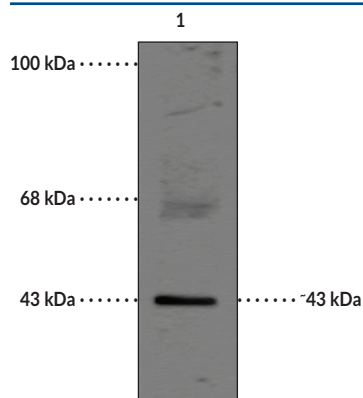
Connexin43 Polyclonal Antibody

Item No. 29257

Overview and Properties

Contents: This vial contains 100 μ l of protein affinity-purified polyclonal antibody.
Synonyms: AVSD3, Cx43, Gap Junction Protein α 1, GJAL
Immunogen: Peptide corresponding to amino acid residues from the C-terminal region of rat connexin43
Molecular Weight: ~43 kDa
Species Reactivity: (+) Rat
Form: Liquid
Storage: -20°C (as supplied)
Stability: \geq 1 year
Storage Buffer: 10 mM HEPES, pH 7.5, with 150 mM sodium chloride, 100 μ g/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: Rat cerebellar lysate

WB of rat cerebellar lysate showing specific immunolabeling of the ~43 kDa Connexin43 Polyclonal Antibody.

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
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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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 the 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 in the liver, prostate, and breast, and exhibits tumor-specific pro- or anti-metastatic effects.^{2,3} Inhibition of *Gja1* with antisense oligonucleotides promotes wound healing in murine skin, skeletal muscle, cardiac tissue, and vascular endothelium, however, global heterozygous knockdown of *Gja1* increases infarct size in a mouse model of ischemia and reperfusion injury.^{1,2} Levels of Cx43 are decreased in postmortem retinal samples from patients with diabetes compared with control individuals.⁴ Cayman's Connexin43 Polyclonal Antibody can be used for Western blot (WB) applications. The antibody recognizes connexin43 at approximately 43 kDa from 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. Tien, T., Muto, T., Zhang, J., *et al.* Association of reduced connexin 43 expression with retinal vascular lesions in human diabetic retinopathy. *Exp. Eye Res.* **146**, 103-106 (2016).

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