



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# Anti-Aquaporin 2 Antibody

Rabbit Anti-Rat Aquaporin 2 Polyclonal  
Catalog No. SPC-503



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

Aquaporin 2 Antibody

### Description

Rabbit Anti-Rat Aquaporin 2 Polyclonal

### Species Reactivity

Human, Mouse, Rat

### Applications

WB, IHC, ICC/IF

### Antibody Dilution

WB (1:2000), IHC (1:200), ICC/IF (1:400); optimal dilutions for assays should be determined by the user.

### Host Species

Rabbit

### Immunogen Species

Rat

### Immunogen

Produced against the C-terminal peptide (Sequence N-CLKGLEPDTDWEEREVRRRQ) of rat aquaporin 2

### Concentration

1 mg/ml

### Conjugates

Alkaline Phosphatase, APC, ATTO 390, ATTO 488, ATTO 565, ATTO 594, ATTO 633, ATTO 655, ATTO 680, ATTO 700, Biotin, FITC, HRP, PE/ATTO 594, PerCP, RPE, Streptavidin, Unconjugated

## Properties

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### Storage Buffer

PBS, 50% glycerol, 0.09% sodium azide

### Storage Temperature

-20°C

### Shipping Temperature

Blue Ice or 4°C

### Purification

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Protein A purified

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### Clonality

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Polyclonal

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### Specificity

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Detects ~28.8kDa. May detect larger glycosylated bands ~35-50kDa.

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### Cite This Product

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Rabbit Anti-Rat Aquaporin 2 Polyclonal (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPC-503)

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### Certificate Of Analysis

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0.5 µg/ml of SPC-503 was sufficient for detection of aquaporin 2 in 10 µg of rat kidney tissue lysate by colorimetric immunoblot analysis using Goat anti-rabbit IgG:HRP as the secondary antibody.

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## Biological Description

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### Alternative Names

ADH water channel Antibody, AQP 2 Antibody, AQP CD Antibody, AQP-2 Antibody, AQP-CD Antibody, AQP2 Antibody, AQP2\_HUMAN Antibody, AQPCD Antibody, Aquaporin 2 collecting duct Antibody, Aquaporin CD Antibody, Aquaporin-2 Antibody, Aquaporin-CD Antibody, Aquaporin2 Antibody, Aquaporine 2 Antibody, Collecting duct water channel protein Antibody, MGC34501 Antibody, Water channel aquaporin 2 Antibody, Water channel protein for renal collecting duct Antibody, WCH CD Antibody, WCH-CD Antibody, WCHCD Antibody

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### Research Areas

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Aquaporins, Ion Channels, Neuroscience

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### Cellular Localization

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Apical cell membrane, Basolateral Cell Membrane, Cell membrane, Cytoplasmic Vesicle, Cytoplasmic vesicle membrane, Golgi apparatus

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### Accession Number

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NP\_037041.2

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### Gene ID

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25386

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### Swiss Prot

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P34080

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### Scientific Background

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Aquaporins selectively conduct water molecules in and out of the cell, while preventing the passage of ions and other solutes. Known as water channels, they are integral membrane pore proteins (1, 2). Aquaporin 2 is the vasopressin-regulated water channel of the apical membrane of collecting duct cells. It is located in kidney epithelial cells and usually lies dormant in intracellular vesicle membranes. When it is needed vasopressin binds to the cell surface vasopressin receptor, activating a signaling pathway that cause AQP2 containing vesicles to fuse with the plasma membrane so the AQP2 can be used by the cell (3). Defects in AQP2 area cause of an autosomal dominant form of nephrogenic diabetes insipidus (NDI) (4).

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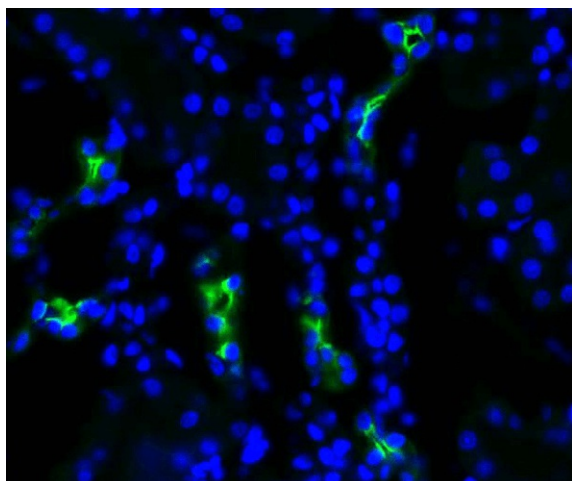
### References

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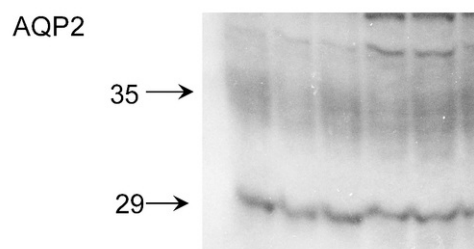
1. Gonen T., Walz T. (2006) Q. Rev. Biophys. 39(4): 361-396.
2. Knepper M.A. (1994) Proc Natl. Acad Sci. USA. 91(14): 6255-6258.
3. Lodish H.F. (2008) Molecular Cell Biology. New York: W.H. Freeman. Print. 445.
4. [www.vivo.colostate.edu/hbooks/molecules/aquaporins.html](http://www.vivo.colostate.edu/hbooks/molecules/aquaporins.html)

## Product Images

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Immunohistochemistry analysis using Rabbit Anti-Aquaporin 2 Polyclonal Antibody (SPC-503). Tissue: kidney tissue. Species: Rat. Primary Antibody: Rabbit Anti-Aquaporin 2 Polyclonal Antibody (SPC-503) at 1:200. Secondary Antibody: FITC Goat Anti-Rabbit (green).



Western blot analysis of Rat kidney inner medullary homogenates showing detection of Aquaporin 2 protein using Rabbit Anti-Aquaporin 2 Polyclonal Antibody (SPC-503). Primary Antibody: Rabbit Anti-Aquaporin 2 Polyclonal Antibody (SPC-503) at 1:2000. Showing glycosylated and non-glycosylated bands.

## Product Citations (4)

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### Western Blot

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#### **Absence of PKC-Alpha Attenuates Lithium-Induced Nephrogenic Diabetes Insipidus.**

Sim, J. H. et al. (2014) PLoS One. 9(7):e101753.

**PubMed ID:** 25006961 **Reactivity:** Mouse **Applications:** Western Blot

#### **Aldosterone does not require angiotensin II to activate NCC through a WNK4/SPAK dependent pathway.**

van der Lubbe, N. et al. (2012) Euro J Physiol. 463 (6): 853-863.

**PubMed ID:** 22549242 **Reactivity:** Rat **Applications:** Western Blot

### Immunocytochemistry/Immunofluorescence

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#### **Role of serotonin in the regulation of renal proximal tubular epithelial cells.**

Erikci, A., Ucar, G. and Yabanoglu-Ciftci, S. (2016) Ren Fail. [Epub ahead of print].

**PubMed ID:** 27277500 **Reactivity:** Mouse **Applications:** Immunocytochemistry/Immunofluorescence

### Other Citations

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**Inhibition of Mitochondrial Complex-1 Restores the Downregulation of Aquaporins in Obstructive Nephropathy.**

Sun, Y. et al. (2016) Am J Physiol Renal Physiol. [Epub ahead of print]

**PubMed ID:** 27413198

**Reviews**

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Based on validation through cited publications.



**StressMarq Biosciences**

June 15, 2016: