

**KD-Validated Anti-Aquaporin 1 Rabbit Monoclonal Antibody**  
**Rabbit monoclonal antibody**  
**Catalog # AGI2334****Specification****KD-Validated Anti-Aquaporin 1 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC, ICC
Primary Accession	<a href="#">P29972</a>
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 29 kDa ; Observed, 28 kDa KDa
Gene Name	AQP1
Aliases	AQP1; Aquaporin 1 (Colton Blood Group); CHIP28; Aquaporin 1 (Channel-Forming Integral Protein, 28kDa, CO Blood Group); Water Channel Protein For Red Blood Cells And Kidney Proximal Tubule; Urine Water Channel; Aquaporin-CHIP; Aquaporin-1; CO; Aquaporin 1 (Channel-Forming Integral Protein, 28kDa); Channel-Like Integral Membrane Protein, 28-KDa; Aquaporin 1, Colton Blood Group Antigen; Colton Blood Group Antigen; Bloodgroup CO Protein; Colton Blood Group; Aquaporin 1; AQP-CHIP; AQP-1
Immunogen	A synthesized peptide derived from human AQP1

**KD-Validated Anti-Aquaporin 1 Rabbit Monoclonal Antibody - Additional Information**

Gene ID **358**

**Other Names**

Aquaporin-1, AQP-1, Aquaporin-CHIP, Channel-like integral membrane protein of 28 kDa, Urine water channel, AQP1 (<a href="http://www.genenames.org/cgi-bin/gene\_symbol\_report?hgnc\_id=633" target="\_blank">HGNC:633</a>)

**KD-Validated Anti-Aquaporin 1 Rabbit Monoclonal Antibody - Protein Information**

Name AQP1 ([HGNC:633](#))

**Function**

Forms a water channel that facilitates the transport of water across cell membranes, playing a crucial role in water homeostasis in various tissues (PubMed:<a href="http://www.uniprot.org/citations/1373524" target="\_blank">1373524</a>, PubMed:<a href="http://www.uniprot.org/citations/23219802" target="\_blank">23219802</a>). Could also be permeable to small solutes including hydrogen peroxide, glycerol and gases such as ammonia

(NH<sub>3</sub>), nitric oxide (NO) and carbon dioxide (CO<sub>2</sub>) (PubMed:<a href="http://www.uniprot.org/citations/16682607" target="\_blank">16682607</a>, PubMed:<a href="http://www.uniprot.org/citations/17012249" target="\_blank">17012249</a>, PubMed:<a href="http://www.uniprot.org/citations/19273840" target="\_blank">19273840</a>, PubMed:<a href="http://www.uniprot.org/citations/33028705" target="\_blank">33028705</a>, PubMed:<a href="http://www.uniprot.org/citations/8584435" target="\_blank">8584435</a>). Recruited to the ankyrin-1 complex, a multiprotein complex of the erythrocyte membrane, it could be part of a CO<sub>2</sub> metabolon, linking facilitated diffusion of CO<sub>2</sub> across the membrane, anion exchange of Cl(-)/HCO<sub>3</sub>(-) and interconversion of dissolved CO<sub>2</sub> and carbonic acid in the cytosol (PubMed:<a href="http://www.uniprot.org/citations/17012249" target="\_blank">17012249</a>, PubMed:<a href="http://www.uniprot.org/citations/35835865" target="\_blank">35835865</a>). In vitro, it shows non-selective gated cation channel activity and may be permeable to cations like K(+) and Na(+) in vivo (PubMed:<a href="http://www.uniprot.org/citations/36949749" target="\_blank">36949749</a>, PubMed:<a href="http://www.uniprot.org/citations/8703053" target="\_blank">8703053</a>).

#### Cellular Location

Cell membrane; Multi-pass membrane protein

#### Tissue Location

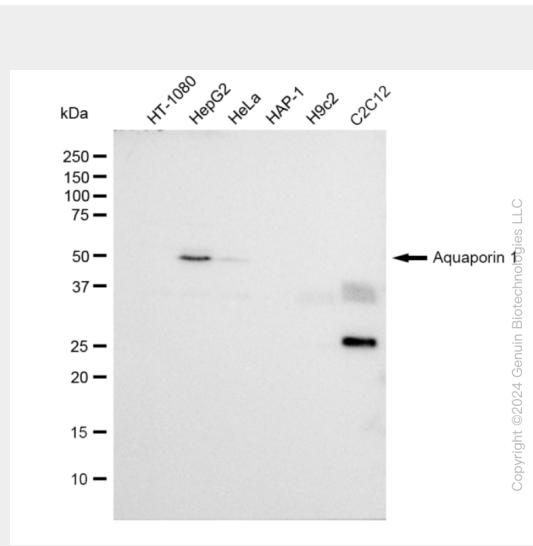
Detected in erythrocytes (at protein level). Expressed in a number of tissues including erythrocytes, renal tubules, retinal pigment epithelium, heart, lung, skeletal muscle, kidney and pancreas. Weakly expressed in brain, placenta and liver

### KD-Validated Anti-Aquaporin 1 Rabbit Monoclonal Antibody - Protocols

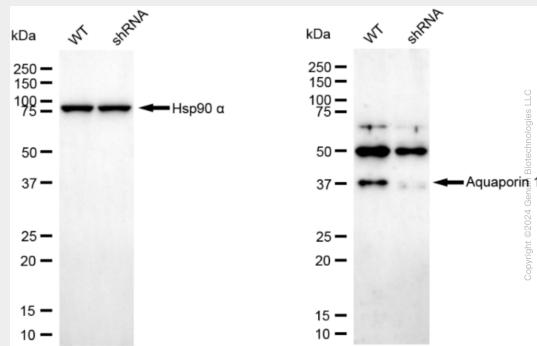
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

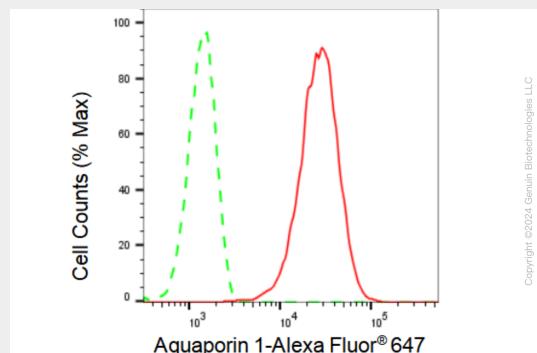
### KD-Validated Anti-Aquaporin 1 Rabbit Monoclonal Antibody - Images



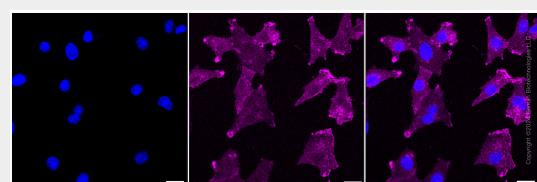
Western blotting analysis using anti-Aquaporin 1 antibody (Cat#AGI2334). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Aquaporin 1 antibody (Cat#AGI2334, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Aquaporin 1 antibody (Cat#AGI2334). Aquaporin 1 expression in wild type (WT) and aquaporin 1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates.  $\beta$ -Tubulin serves as a loading control. The blot was incubated with anti-Aquaporin 1 antibody (Cat#AGI2334, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Aquaporin 1 expression in C2C12 cells using Aquaporin 1 antibody (Cat#AGI2334, 1:2,000). Green, isotype control; red, Aquaporin 1.



Immunocytochemical staining of C2C12 cells with Aquaporin 1 antibody (Cat#AGI2334, 1:1,000). Nuclei were stained blue with DAPI; Aquaporin 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.