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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	P29972
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 (HGNC:633)

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:1373524, PubMed:23219802). Could also be permeable to small solutes including hydrogen peroxide, glycerol and gases such as amonnia

(NH3), nitric oxide (NO) and carbon dioxide (CO2) (PubMed:16682607, PubMed:17012249, PubMed:19273840, PubMed:33028705, PubMed:8584435). Recruited to the ankyrin-1 complex, a multiprotein complex of the erythrocyte membrane, it could be part of a CO2 metabolon, linking facilitated diffusion of CO2 across the membrane, anion exchange of Cl(-)/HCO3(-) and interconversion of dissolved CO2 and carbonic acid in the cytosol (PubMed:17012249, PubMed:35835865). In vitro, it shows non-selective gated cation channel activity and may be permeable to cations like K(+) and Na(+) in vivo (PubMed:36949749, PubMed:8703053).

Cellular Location
Cell membrane; Multi-pass membrane protein

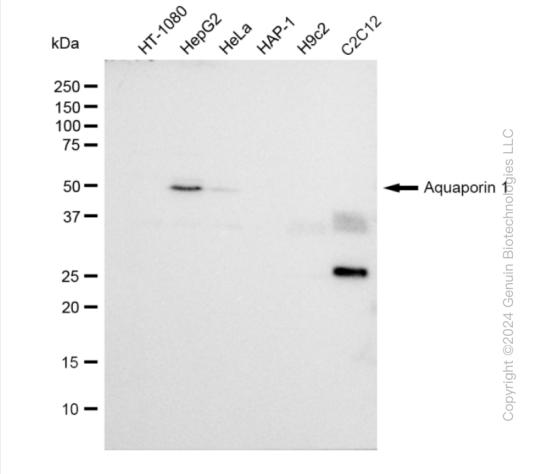
Tissue Location
Detected in erythrocytes (at protein level). Expressed in a number of tissues including erythrocytes, renal tubules, retinal pigment epithelium, heart, lung, skeletal muscle, kidney and pancreas. Weakly expressed in brain, placenta and liver

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 Cytomety
- Cell Culture

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



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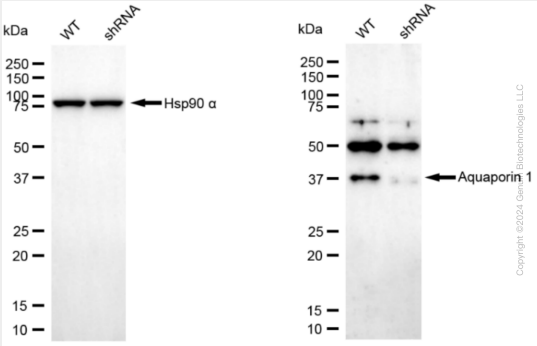
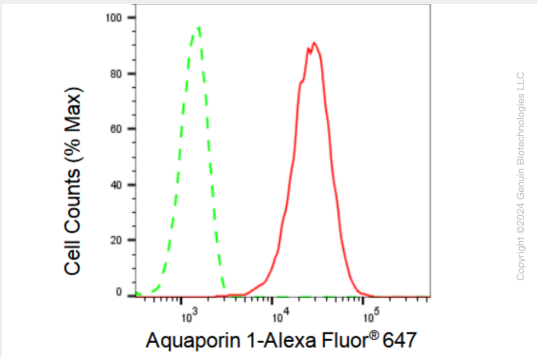
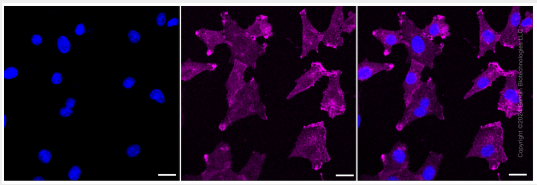
Western blotting analysis using anti-Aquaporin 1 antibody (Cat#AGI2334). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Aquaporin 1 antibody (Cat#AGI2334, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



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. β-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.