

AQP1 Antibody
Rabbit mAb
Catalog # AP91197

Specification

AQP1 Antibody - Product Information

Application	WB, IHC, ICC
Primary Accession	P29972
Reactivity	Rat
Clonality	Monoclonal
Other Names	
Aquaporin1; Aquaporin 1; Aquaporin-1; Aquaporin-CHIP; Urine water channel; AQP1; CHIP28;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	28526 Da

AQP1 Antibody - Additional Information

Dilution	WB~~1:1000 IHC~~1:100~500 ICC~~N/A
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human AQP1
Description	Forms a water-specific channel that provides the plasma membranes of red cells and kidney proximal tubules with high permeability to water, thereby permitting water to move in the direction of an osmotic gradient.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

AQP1 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 ammonia (NH3), nitric oxide (NO) and carbon dioxide (CO2) (PubMed:16682607, PubMed:16682607).

[17012249](http://www.uniprot.org/citations/17012249), PubMed: [19273840](http://www.uniprot.org/citations/19273840), PubMed: [33028705](http://www.uniprot.org/citations/33028705), PubMed: [8584435](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/17012249), PubMed: [35835865](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/36949749), PubMed: [8703053](http://www.uniprot.org/citations/8703053)).

Cellular Location

Cell membrane; Multi-pass membrane protein

Tissue Location

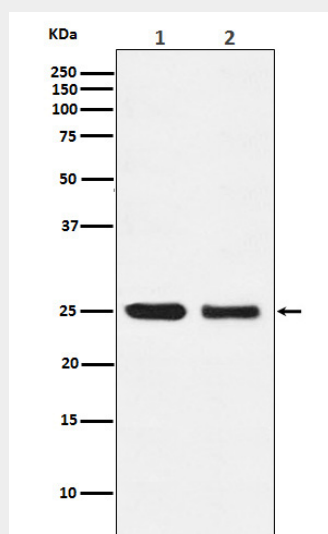
Detected in erythrocytes (at protein level). Expressed in a number of tissues including erythrocytes, renal tubules, retinal pigment epithelium, heart, lung, skeletal muscle, kidney and pancreas. Weakly expressed in brain, placenta and liver

AQP1 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](#)

AQP1 Antibody - Images



Western blot analysis of AQP1 expression in (1) Human fetal kidney lysate; (2) Human fetal lung lysate.