

AQP1 / Aquaporin 1 Antibody
Rabbit Polyclonal Antibody
Catalog # ALS15341

Specification

AQP1 / Aquaporin 1 Antibody - Product Information

Application	WB, IHC-P, IF
Primary Accession	P29972
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	29kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A IF~~1:50~200

AQP1 / Aquaporin 1 Antibody - Additional Information

Gene ID 358

Other Names

Aquaporin-1, AQP-1, Aquaporin-CHIP, Urine water channel, Water channel protein for red blood cells and kidney proximal tubule, AQP1, CHIP28

Target/Specificity

Detects ~28.5kDa. Glycosylated bands ~35-50kDa.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles.

Precautions

AQP1 / Aquaporin 1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

AQP1 / Aquaporin 1 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:17012249, PubMed:19273840, PubMed:19273840).

[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

Volume

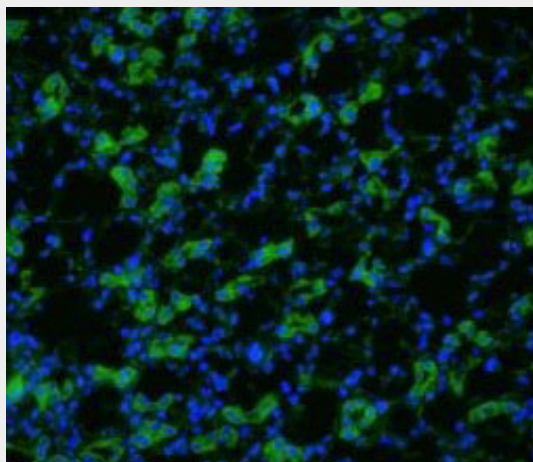
50 µl

AQP1 / Aquaporin 1 Antibody - Protocols

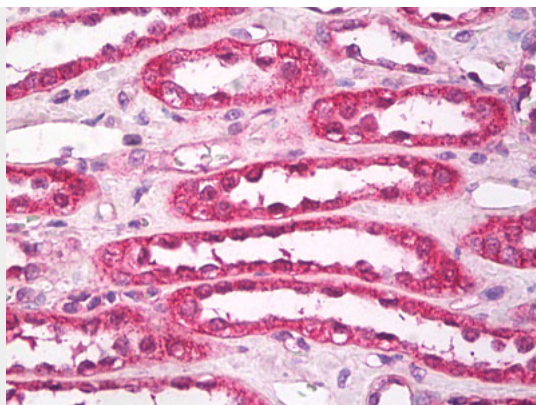
Provided below are standard protocols that you may find useful for product applications.

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

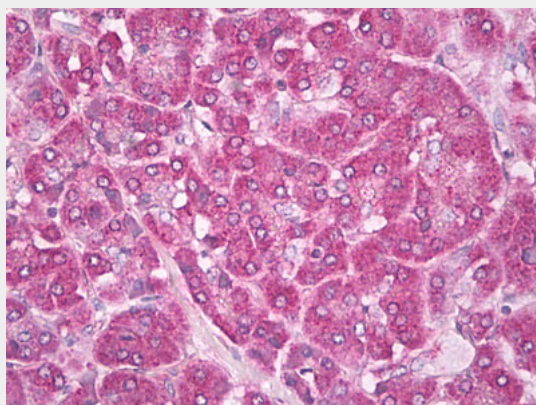
AQP1 / Aquaporin 1 Antibody - Images



IF analysis of Aquaporin 1 in rat kidney tissue using a 1 in 200 dilution of AQP1 / Aquaporin 1...



Anti-AQP1 / Aquaporin 1 antibody IHC of human kidney.



Anti-AQP1 / Aquaporin 1 antibody IHC of human pancreas.

AQP1 / Aquaporin 1 Antibody - Background

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.

AQP1 / Aquaporin 1 Antibody - References

- Preston G.M., et al. Proc. Natl. Acad. Sci. U.S.A. 88:11110-11114(1991).
Moon C., et al. J. Biol. Chem. 268:15772-15778(1993).
Ruiz A.C., et al. Biochim. Biophys. Acta 1282:174-178(1996).
Li X., et al. Biochem. Mol. Biol. Int. 32:371-377(1994).
Ota T., et al. Nat. Genet. 36:40-45(2004).