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AQP1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17893b

Specification

AQP1 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	P29972
Other Accession	P29975, Q02013, P47865, NP_932766.1, P56401
Reactivity	**Human, Mouse**
Predicted	**Bovine, Rat, Sheep**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**28526**
Antigen Region	**241-269**

AQP1 Antibody (C-term) - 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
This AQP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 241-269 amino acids from the C-terminal region of human AQP1.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
AQP1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

AQP1 Antibody (C-term) - Protein Information

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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

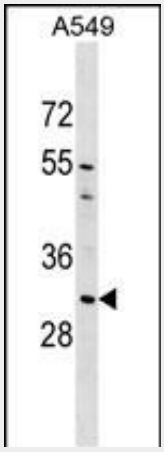
Tissue Location
Detected in erythrocytes (at protein level). Expressed in a number of tissues including erythrocytes, renal tubules, retinal pigment epithelium, heart, lung, skeletal muscle, kidney and pancreas. Weakly expressed in brain, placenta and liver

AQP1 Antibody (C-term) - 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

AQP1 Antibody (C-term) - Images



AQP1 Antibody (C-term) (Cat. #AP17893b) western blot analysis in A549 cell line lysates (35ug/lane).This demonstrates the AQP1 antibody detected the AQP1 protein (arrow).

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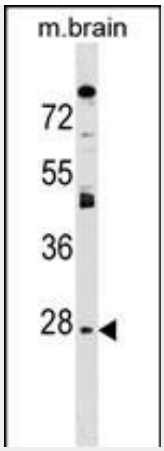

AQP1 Antibody (C-term) (Cat. #AP17893b) western blot analysis in mouse brain tissue lysates (35ug/lane).This demonstrates the AQP1 antibody detected the AQP1 protein (arrow).

AQP1 Antibody (C-term) - Background

Aquaporins are a family of small integral membrane proteins related to the major intrinsic protein (MIP or AQP0). This gene encodes an aquaporin which functions as a molecular water channel protein. It is a homotetramer with 6 bilayer spanning domains and N-glycosylation sites. The protein physically resembles channel proteins and is abundant in erythrocytes and renal tubes. The gene encoding this aquaporin is a possible candidate for disorders involving imbalance in ocular fluid movement. Several transcript variants encoding different isoforms have been found for this gene.

AQP1 Antibody (C-term) - References

Chen, L.M., et al. Am. J. Physiol. Regul. Integr. Comp. Physiol. 299 (5), R1163-R1174 (2010) :
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Shankardas, J., et al. Mol. Vis. 16, 1538-1548 (2010) :
Halverson, G.R., et al. Immunohematology 26(1):22-26(2010)
Sui, H., et al. Nature 414(6866):872-878(2001)