

# AQP1 Rabbit pAb

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Catalog # AP50868

## Product Information

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<b>Application</b>	IHC-P, IHC-F, IF
<b>Primary Accession</b>	<a href="#">P29972</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Predicted</b>	Dog, Pig, Horse, Sheep
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	28526
<b>Physical State</b>	Liquid
<b>Immunogen</b>	KLH conjugated synthetic peptide derived from human AQP1
<b>Epitope Specificity</b>	181-269/269
<b>Isotype</b>	IgG
<b>Purity</b>	affinity purified by Protein A
<b>Buffer</b>	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
<b>SUBCELLULAR LOCATION</b>	Membrane; Multi-pass membrane protein.
<b>SIMILARITY</b>	Belongs to the MIP/aquaporin (TC 1.A.8) family.
<b>SUBUNIT</b>	Homotetramer. Interacts with EPHB2; involved in endolymph production in the inner ear (By similarity).
<b>Important Note</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>Background Descriptions</b>	Aquaporin 1 is a 28kD integral membrane protein which was originally identified in red blood cells and renal proximal tubules. AQP1 is also expressed by the choroid plexus and various other tissues. It 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.

## Additional Information

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<b>Gene ID</b>	358
<b>Other Names</b>	Aquaporin-1, AQP-1, Aquaporin-CHIP, Channel-like integral membrane protein of 28 kDa, Urine water channel, AQP1 ( <a href="#">HGNC:633</a> )
<b>Target/Specificity</b>	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.
<b>Dilution</b>	IHC-P=1:200-500,IHC-F=1:200-500,IF=1:200-500
<b>Storage</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

## Protein Information

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<b>Name</b>	AQP1 ( <a href="#">HGNC:633</a> )
<b>Function</b>	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="#">1373524</a> , PubMed: <a href="#">23219802</a> ). 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: <a href="#">16682607</a> , PubMed: <a href="#">17012249</a> , PubMed: <a href="#">19273840</a> , PubMed: <a href="#">33028705</a> , PubMed: <a href="#">8584435</a> ). Recruited to the ankyrin-1 complex, a multiprotein complex of the erythrocyte membrane, it could be part of a CO2 metabolism, 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: <a href="#">17012249</a> , PubMed: <a href="#">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="#">36949749</a> , PubMed: <a href="#">8703053</a> ).
<b>Cellular Location</b>	Cell membrane; Multi-pass membrane protein
<b>Tissue Location</b>	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

## Background

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Aquaporin 1 is a 28kD integral membrane protein which was originally identified in red blood cells and renal proximal tubules. AQP1 is also expressed by the choroid plexus and various other tissues. It 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.

## References

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## Images

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Image not found : 202510/AP50868\_1.jpg

Paraformaldehyde-fixed, paraffin embedded (rat kidney); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (AQP1) Polyclonal Antibody, Unconjugated (AP50868) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.