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AQP1 Rabbit pAb

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Catalog # AP50868

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P29972
Reactivity	Rat, Human, Mouse
Predicted	Pig, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	28526
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human AQP1
Epitope Specificity	181-269/269
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane; Multi-pass membrane protein.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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

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)
Dilution	IHC-P=1:200-500,IHC-F=1:200-500,IF=1:200-500
Storage	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

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

Background

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References

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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).

Images

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) instructionsand DAB staining.

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