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Anti-Aquaporin 1 Antibody

Catalog # ABO10505

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	P29972
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Aquaporin-1(AQP1) detection. Tested with WB, IHC-P, IHC-F in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

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
Calculated MW	28526
Application Details	Immunohistochemistry(Frozen Section), 0.5-1 □g/ml, Rat, Human, Mouse Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, Mouse, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cell membrane ; Multi-pass membrane protein .
Tissue Specificity	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. .
Source	Eukaryota
Protein Name	Aquaporin-1(AQP-1)
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Aquaporin 1(251-269aa EEYDLDADDINSRVEMKPK), identical to the related rat and mouse sequences.

Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the MIP/aquaporin (TC 1.A.8) family.

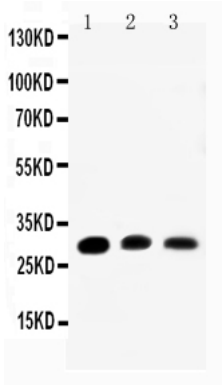
Protein Information

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

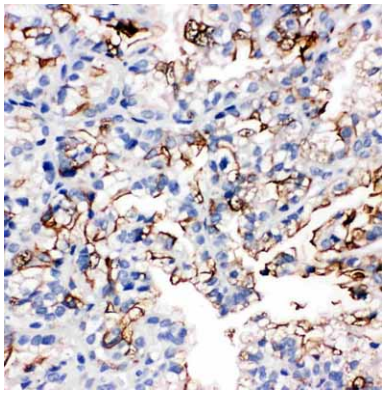
Background

Aquaporin 1 is a 28-kD integral protein though at first to be a breakdown product of the Rh polypeptide but was later shown to be a unique molecule that is abundant in erythrocytes and renal 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.

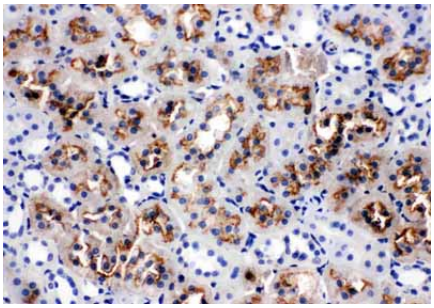
Images



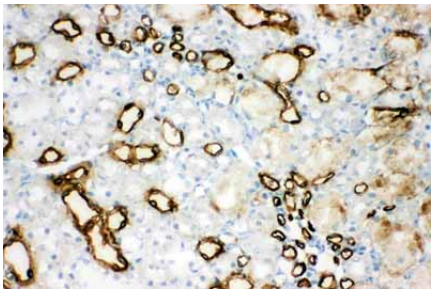
Anti-Aquaporin 1 antibody, ABO10505, Western blottingLane 1: Rat Kidney Tissue LysateLane 2: Rat Lung Tissue LysateLane 3: SMMC Cell Lysate



Anti-Aquaporin 1 antibody, ABO10505, IHC(P)IHC(P): Human Kidney Cancer Tissue



Anti-Aquaporin 1 antibody, ABO10505, IHC(P)IHC(P): Rat Kidney Tissue



Anti-Aquaporin 1 antibody, ABO10505, IHC(F)IHC(F): Rat Kidney Tissue

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