10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

AQP1 Antibody

Rabbit mAb
Catalog # AP91197

Product Information

Application	WB, IHC, IF, ICC, IHF
Primary Accession	P29972
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	Aquaporin1; Aquaporin 1; Aquaporin-1; Aquaporin-CHIP; Urine water channel; AQP1; CHIP28;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	28526

Additional Information

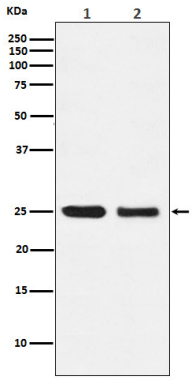
Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human AQP1
Description	Forms a water-specific channel that provides the plasma membranes of red cells and kidney proximal tubules with high permeability to water, thereby permitting water to move in the direction of an osmotic gradient.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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

Images



Western blot analysis of AQP1 expression in (1) Human fetal kidney lysate; (2) Human fetal lung lysate.

Image not found : 202311/AP91197-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human breast, using AQP1 Antibody.

Image not found : 202311/AP91197-wb6.jpg

Celecoxib protects hyperoxia-induced lung injury via NF-κB and AQP1. -Frontiers in pediatrics