

**Anti-Aquaporin 8 Antibody**  
**Catalog # ABO10829****Specification**

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**Anti-Aquaporin 8 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">O94778</a>
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Aquaporin-8(AQP8) detection. Tested with WB in Human.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-Aquaporin 8 Antibody - Additional Information**

**Gene ID** 343

**Other Names**

Aquaporin-8, AQP-8, AQP8

**Calculated MW**

27381 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human<br>

**Subcellular Localization**

Membrane; Multi-pass membrane protein.

**Tissue Specificity**

Expressed only in pancreas and colon.

**Protein Name**

Aquaporin-8(AQP-8)

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Thimerosal, 0.05mg NaN<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human Aquaporin 8(1-19aa MSGEIAMCEPEFGNDKARE).

**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.**

**Anti-Aquaporin 8 Antibody - Protein Information**

**Name** AQP8 ([HGNC:642](#))

**Function**

Channel that allows the facilitated permeation of water and uncharged molecules, such as hydrogen peroxide and the neutral form of ammonia (NH<sub>3</sub>), through cellular membranes such as plasma membrane, inner mitochondrial membrane and endoplasmic reticulum membrane of several tissues (PubMed:<a href="http://www.uniprot.org/citations/15948717" target="\_blank">15948717</a>, PubMed:<a href="http://www.uniprot.org/citations/18948439" target="\_blank">18948439</a>, PubMed:<a href="http://www.uniprot.org/citations/23541115" target="\_blank">23541115</a>, PubMed:<a href="http://www.uniprot.org/citations/26972385" target="\_blank">26972385</a>, PubMed:<a href="http://www.uniprot.org/citations/29732408" target="\_blank">29732408</a>, PubMed:<a href="http://www.uniprot.org/citations/30579780" target="\_blank">30579780</a>). The transport of the ammonia neutral form induces a parallel transport of proton, at alkaline pH when the concentration of ammonia is high (By similarity). However, it is unclear whether the transport of proton takes place via the aquaporin or via an endogenous pathway (By similarity). Also, may transport ammonia analogs such as formamide and methylamine, a transport favoured at basic pH due to the increase of unprotonated (neutral) form, which is expected to favor diffusion (PubMed:<a href="http://www.uniprot.org/citations/15948717" target="\_blank">15948717</a>). Does not transport urea or glycerol (PubMed:<a href="http://www.uniprot.org/citations/15948717" target="\_blank">15948717</a>). The water transport mechanism is mercury- and copper-sensitive and passive in response to osmotic driving forces (PubMed:<a href="http://www.uniprot.org/citations/15948717" target="\_blank">15948717</a>). At the canicular plasma membrane, mediates the osmotic transport of water toward the bile canaliculus and facilitates the cAMP-induced bile canicular water secretion, a process involved in bile formation (PubMed:<a href="http://www.uniprot.org/citations/18948439" target="\_blank">18948439</a>). In addition, mediates the hydrogen peroxide release from hepatocyte mitochondria that modulates the SREBF2-mediated cholesterol synthesis and facilitates the mitochondrial ammonia uptake which is metabolized into urea, mainly under glucagon stimulation (PubMed:<a href="http://www.uniprot.org/citations/30579780" target="\_blank">30579780</a>, PubMed:<a href="http://www.uniprot.org/citations/34292591" target="\_blank">34292591</a>). In B cells, transports the CYBB- generated hydrogen peroxide from the external leaflet of the plasma membrane to the cytosol to promote B cell activation and differentiation for signal amplification (By similarity). In the small intestine and colon system, mediates water transport through mitochondria and apical membrane of epithelial cells (By similarity). May play an important role in the adaptive response of proximal tubule cells to acidosis possibly by facilitating the mitochondrial ammonia transport (PubMed:<a href="http://www.uniprot.org/citations/22622463" target="\_blank">22622463</a>).

**Cellular Location**

Cell membrane; Multi-pass membrane protein. Mitochondrion inner membrane; Multi-pass membrane protein. Apical cell membrane {ECO:0000250|UniProtKB:P56404, ECO:0000250|UniProtKB:P56405}; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:P56405}; Multi-pass membrane protein. Smooth endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P56404}; Multi-pass membrane protein. Note=Localized at

the hepatocyte canalicular plasma membrane (PubMed:18948439). Localized at the apical membrane of the gall-bladder epithelial cells lining both the neck and corpus regions, the pancreatic acinar cells and mucosal epithelium of the colon and jejunum (By similarity). Trafficking from intracellular vesicles to the hepatocyte canalicular plasma membrane is induced by glucagon or the second messenger 3',5'-cyclic AMP and the translocation is protein kinase A and microtubule-dependent. Localized at the brush border membranes of epithelial cells from jejunum (By similarity). Localized at the luminal membranes of crypts in ascending colon (By similarity) {ECO:0000250|UniProtKB:P56404, ECO:0000250|UniProtKB:P56405, ECO:0000269|PubMed:18948439}

#### **Tissue Location**

Detected in the sperm midpiece (at protein level) (PubMed:28042826). Expressed only in pancreas and colon

#### **Anti-Aquaporin 8 Antibody - Protocols**

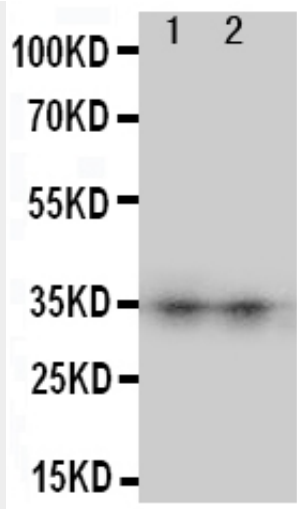
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **Anti-Aquaporin 8 Antibody - Images**



Anti-Aquaporin 8 antibody, ABO10829, Western blottingAll lanes: Anti Aquaporin 8 (ABO10829) at 0.5ug/mlWB: A431 Whole Cell Lysate at 40ugPredicted bind size: 27KDObserved bind size: 27KD



Anti-Aquaporin 8 antibody, ABO10829, Western blotting Lane 1: SW620 Cell Lysate Lane 2: COLO320 Cell Lysate

#### **Anti-Aquaporin 8 Antibody - Background**

AQP8, also known as Aquaporin-8, is a protein that in humans is encoded by the AQP8 gene. Aquaporin 8 (AQP8) is a water channel protein. Aquaporins are a family of small integral membrane proteins related to the major intrinsic protein (MIP or AQP0). Aquaporin 8 mRNA is found in pancreas and colon but not other tissues. The AQP8 gene contains 6 exons. It is mapped to chromosome 16p12. Northern blot analysis of human tissues detected a 1.35-kb AQP8 mRNA only in pancreas and colon.