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

AQP8 / Aquaporin 8 Antibody (clone 1F8)

Mouse Monoclonal Antibody
Catalog # ALS13275

Specification

AQP8 / Aquaporin 8 Antibody (clone 1F8) - Product Information

Application	**WB, IHC-P, E**
Primary Accession	O94778
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**27kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A** **E~~N/A**

AQP8 / Aquaporin 8 Antibody (clone 1F8) - Additional Information

Gene ID 343

Other Names
Aquaporin-8, AQP-8, AQP8

Reconstitution & Storage
Store at -20°C. Aliquot to avoid freeze/thaw cycles.

Precautions
AQP8 / Aquaporin 8 Antibody (clone 1F8) is for research use only and not for use in diagnostic or therapeutic procedures.

AQP8 / Aquaporin 8 Antibody (clone 1F8) - 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 (NH3), through cellular membranes such as plasma membrane, inner mitochondrial membrane and endoplasmic reticulum membrane of several tissues (PubMed:15948717, PubMed:18948439, PubMed:23541115, PubMed:26972385, PubMed:29732408, PubMed:30579780). 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 favourited at basic pH due to the increase of unprotonated (neutral) form, which is expected to favor diffusion (PubMed:15948717). Does not transport urea or glycerol (PubMed:15948717). The water transport mechanism is mercury- and copper-sensitive and passive in response to osmotic driving forces (PubMed:15948717). At the canicular plasma membrane, mediates the osmotic transport of water toward the bile canaliculus and facilitates the cAMP-induced bile canalicular water secretion, a process involved in bile formation (PubMed:18948439). 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:30579780, PubMed:34292591). 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:22622463).

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

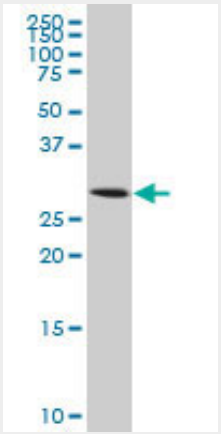
AQP8 / Aquaporin 8 Antibody (clone 1F8) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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

AQP8 / Aquaporin 8 Antibody (clone 1F8) - Images



AQP8 monoclonal antibody, clone 1F8. Western blot of AQP8 expression in IMR-32.

AQP8 / Aquaporin 8 Antibody (clone 1F8) - Background

Forms a water-specific channel; mercury-sensitive. Not permeable to glycerol or urea.

AQP8 / Aquaporin 8 Antibody (clone 1F8) - References

Koyama N.,et al.Genomics 54:169-172(1998).
Tani T.,et al.Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
Sjoeblom T.,et al.Science 314:268-274(2006).