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Aquaporin 8 Rabbit pAb

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Catalog # AP52054

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O94778
Reactivity	Rat
Predicted	Pig, Dog, Human, Mouse, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	27381
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Aquaporin 8
Epitope Specificity	101-220/261
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	Forms a water-specific channel; mercury-sensitive. plays a role in water transport across hepatocyte membranes [RGD, Feb 2006]

Additional Information

Gene ID	343
Other Names	Aquaporin-8, AQP-8, AQP8 (HGNC:642)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	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

Background

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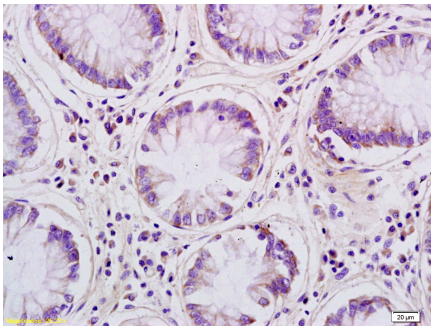
References

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).

Images



Tissue/cell: human colon carcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min; Incubation: Anti-AQP8/Aquaporin 8 Polyclonal Antibody, Unconjugated(AP52054) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining