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Aqp8 Antibody - middle region

Rabbit Polyclonal Antibody
Catalog # AI12542

Product Information

Application	WB
Primary Accession	P56405
Other Accession	NM_019158, NP_062031
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Guinea Pig, Horse, Bovine, Sheep
Predicted	Human, Mouse, Rat, Rabbit, Pig, Dog, Guinea Pig, Horse, Bovine, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	28055

Additional Information

Gene ID	29172
Alias Symbol	AQP-8
Other Names	Aquaporin-8, AQP-8, Aqp8
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-Aqp8 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	Aqp8 Antibody - middle region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Aqp8 {ECO:0000303|PubMed:16311720, ECO:0000312|RGD:2146}
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:12774023, PubMed:15749715, PubMed:15948717, PubMed:15988592, PubMed:16177191, PubMed:16624991, PubMed:17189259, PubMed:18059526, PubMed:20132793, PubMed:23299935, PubMed:31372390, PubMed:33892285, PubMed:9299432, PubMed:9374520). The transport of ammonia neutral form induces a parallel transport of proton, at alkaline pH when the concentration of ammonia is high (PubMed:15988592). However, it is unclear whether the transport of

proton takes place via the aquaporin or via an endogenous pathway (PubMed:15988592). 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:15749715, PubMed:15948717, PubMed:15988592). 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:18059526, PubMed:20132793, PubMed:9299432, PubMed:9374520). 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 (By similarity). 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:20132793, PubMed:23299935, PubMed:31372390). 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 (PubMed:15749715, PubMed:16177191, PubMed:18059526). May play an important role in the adaptive response of proximal tubule cells to acidosis possibly facilitating mitochondrial ammonia transport (By similarity).

Cellular Location

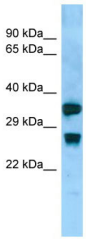
Cell membrane; Multi-pass membrane protein. Mitochondrion inner membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein. Smooth endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P56404}; Multi-pass membrane protein. Note=Localized at the hepatocyte canalicular plasma membrane (PubMed:11436986, PubMed:12774023). Localized at the apical membrane of the gall-bladder epithelial cells lining both the neck and corpus regions (By similarity). Localized on the apical membranes of pancreatic acinar cells and mucosal epithelium of the colon and jejunum (PubMed:11436986, PubMed:16177191). 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 (PubMed:11278499, PubMed:12774023). Localized at the brush border membranes of epithelial cells from jejunum (PubMed:18059526). Localized at the luminal membranes of crypts in ascending colon (By similarity) {ECO:0000250|UniProtKB:P56404, ECO:0000269|PubMed:11278499, ECO:0000269|PubMed:11436986, ECO:0000269|PubMed:12774023, ECO:0000269|PubMed:16177191, ECO:0000269|PubMed:18059526}

Tissue Location

Highly expressed in sperm, pancreas and liver (PubMed:9299432, PubMed:9374520). Expressed in hepatocytes, acinal cells of pancreas and salivary gland, and absorptive colonic epithelial cells (PubMed:9374520). Expressed in the myoepithelium of submandibular and parotid glands (PubMed:16311720). Expressed in pancreatic beta- cells (PubMed:33892285). Expressed in testis but not in epididymis (PubMed:11369592). Expressed in small intestine (PubMed:18059526)

Images

Host: Rabbit



Target Name: Aqp8
Sample Tissue: Rat Small Intestine lysates
Antibody Dilution: 1.0µg/ml

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.