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Anti-Aquaporin 10 Antibody

Catalog # ABO11402

Product Information

Application	WB
Primary Accession	Q96PS8
Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Aquaporin-10(AQP10) detection. Tested with WB in Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	89872
Other Names	Aquaporin-10, AQP-10, Aquaglyceroporin-10, Small intestine aquaporin, AQP10
Calculated MW	31763
Application Details	Western blot, 0.1-0.5 □g/ml, Human
Subcellular Localization	Membrane; Multi-pass membrane protein.
Tissue Specificity	Expressed exclusively in duodenum and jejunum. Highest expression in absorptive epithelial cells at the tips of villi in the jejunum.
Source	Eukaryota
Protein Name	Aquaporin-10
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Aquaporin 10(286-301aa SELETPASAQMLECKL).
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.

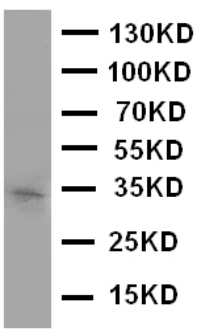
Protein Information

Name	AQP10 (HGNC:16029)
Function	Aquaglyceroporins form homotetrameric transmembrane channels, with each monomer independently mediating glycerol and water transport across the plasma membrane along their osmotic gradient (PubMed:11573934, PubMed:12084581, PubMed:21733844, PubMed:23382902, PubMed:30420639). Could also be permeable to urea (PubMed:12084581). Among aquaglyceroporins, it exhibits a unique pH-gated glycerol transport activity, being more active at acidic pH. It most likely plays a central role in the efflux of glycerol formed during triglyceride hydrolysis in adipocytes and in glycerol uptake by enterocytes, as both processes occur and are stimulated at acidic pH (PubMed:11573934, PubMed:23382902, PubMed:30420639).
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Lipid droplet. Note=Detected around lipid droplets
Tissue Location	Detected in epithelial cells on villi in the ileum, and also in stomach, jejunum, colon, rectum, white adipose tissue and placenta (at protein level) (PubMed:15221416, PubMed:23382902) Expressed in duodenum and jejunum. Highest expression in absorptive epithelial cells at the tips of villi in the jejunum (PubMed:11573934, PubMed:12084581). Detected in subcutaneous adipose tissue (PubMed:23382902).

Background

AQP10 was identified in human small intestine. This gene encoded a 264-amino-acid protein with high sequence identity with AQP3(53%), 9(52%), and 7(43%). These AQPs constitute one subfamily of AQP family that is differentiated from the other subfamily of AQP(AQP0, 1, 2, 4, 5, 6, and 8) by sequence homology. Northern blot analysis revealed expression of a 2.3-kb AQP10 transcript in jejunum but not liver. RNase protection analysis detected nearly exclusive expression in duodenum and jejunum. In situ hybridization analysis demonstrated highest expression of AQP10 in absorptive epithelial cells at the tips of villi in the jejunum. SDS-PAGE analysis showed expression of a 28-kD AQP10 protein, similar to its predicted size as well as to that of the other AQPs. Functional analysis indicated that cells expressing AQP10 are permeable to relatively low amounts of water, but, unlike AQP3, AQP7, and AQP9, are not permeable to urea or glycerol.

Images



Anti-Aquaporin 10 antibody, ABO11402, Western blottingWB: COLO320 Cell Lysate

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