

Anti-AQP11 Picoband Antibody

Catalog # ABO11662

Product Information

Application	WB
Primary Accession	Q8NBQ7
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Aquaporin-11(AQP11) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	282679
Other Names	Aquaporin-11, AQP-11, AQP11, AQPX1
Calculated MW	30203
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Membrane ; Multi-pass membrane protein .
Source	Eukaryota
Protein Name	Aquaporin-11
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human AQP11 (35-70aa ARQQLHRPVAHAFLVLEFLATFQLCCCTHELQLLSEQ), different from the related mouse sequence by two amino acids, and from the related rat sequence by three amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20° C for one year. After reconstitution, 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.

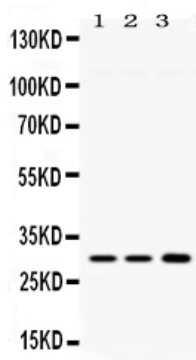
Protein Information

Name	AQP11 (HGNC:19940)
Synonyms	AQPX1
Function	Channel protein that facilitates the transport of water, glycerol and hydrogen peroxide across membrane of cell or organelles guaranteeing intracellular homeostasis in several organs like liver, kidney and brain (PubMed: 24845055 , PubMed: 24918044 , PubMed: 31546170). In situation of stress, participates in endoplasmic reticulum (ER) homeostasis by regulating redox homeostasis through the transport of hydrogen peroxide across the endoplasmic reticulum membrane thereby regulating the oxidative stress through the NADPH oxidase 2 pathway (PubMed: 31546170). Plays a role by maintaining an environment suitable for translation or protein foldings in the ER lumen namely by participating in the PKD1 glycosylation processing resulting in regulation of PKD1 membrane trafficking thereby preventing the accumulation of unfolding protein in ER (By similarity). Plays a role in the proximal tubule function by regulating its endosomal acidification (By similarity). May play a role in postnatal kidney development (By similarity).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Cytoplasmic vesicle membrane; Multi-pass membrane protein. Cell membrane {ECO:0000250 UniProtKB:F6S3G9}; Multi-pass membrane protein. Note=Localizes mainly to the periphery of lipid droplets (PubMed:24845055). Localizes to cytoplasmic vesicles in maturing spermatozoa (PubMed:28042826). It accumulates partly in mitochondrial-associated endoplasmic reticulum membranes (PubMed:31546170).
Tissue Location	Detected in the sperm head and tail (at protein level) (PubMed:28042826). Expressed in subcutaneous adipocytes (PubMed:24845055). Expressed in testis, kidney and ejaculated spermatozoa (PubMed:19812234).

Background

AQP11 has a unique asparagine-proline-alanine (NPA) box distinct from those of other AQPs, suggesting a different pore structure and function. Using Northern blot analysis, they detected highest expression of mouse Aqp11 in testis, followed by liver and kidney. Expression was much weaker in heart, brain, and muscle. Western blot analysis of mouse kidney membrane fractions detected Aqp11 at an apparent molecular mass of 26 kD, lower than the calculated molecular mass of 30 kD. Immunohistochemical analysis localized Aqp11 to mouse renal proximal tubule cells, where it showed a perinuclear distribution. Fluorescence-tagged Aqp11 localized with an endoplasmic reticulum marker.

Images



Western blot analysis of AQP11 expression in rat brain extract (lane 1), mouse brain extract (lane 2) and HELA whole cell lysates (lane 3). AQP11 at 30kD was detected using rabbit anti AQP11 Antigen Affinity purified polyclonal antibody (Catalog # ABO11662) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .

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