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

Aquaporin 2 Rabbit mAb

Catalog # AP75097

Product Information

Application	WB, IHC-P, IP
Primary Accession	P41181
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	28837

Additional Information

Gene ID	359
Other Names	AQP2
Dilution	WB~~1:500-1:1000 IHC-P~~N/A IP~~1:20-1:50
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	AQP2 (HGNC:634)
Function	Forms a water-specific channel that provides the plasma membranes of renal collecting duct with high permeability to water, thereby permitting water to move in the direction of an osmotic gradient (PubMed:15509592, PubMed:7510718, PubMed:7524315, PubMed:8140421, PubMed:8584435). Plays an essential role in renal water homeostasis (PubMed:15509592, PubMed:7524315, PubMed:8140421). Could also be permeable to glycerol (PubMed:8584435).
Cellular Location	Apical cell membrane; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:P34080}; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle membrane; Multi-pass membrane protein. Golgi apparatus, trans-Golgi network membrane; Multi-pass membrane protein. Note=Shuttles from vesicles to the apical membrane (PubMed:15509592). Vasopressin-regulated phosphorylation is required for translocation to the apical cell membrane

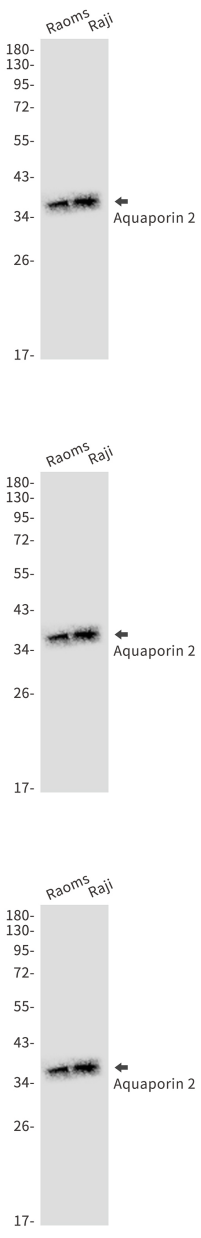
(PubMed:15509592). PLEKHA8/FAPP2 is required to transport AQP2 from the TGN to sites where AQP2 is phosphorylated (By similarity) {ECO:0000250|UniProtKB:P34080, ECO:0000269|PubMed:15509592}

Tissue Location Expressed in collecting tubules in kidney medulla (at protein level) (PubMed:7510718). Detected in kidney (PubMed:7510718).

Background

The basic job of aquaporin 2 is to reabsorb water from the urine while its being removed from the blood by the kidney. Aquaporin 2 is in kidney epithelial cells and usually lies dormant in intracellular vesicle membranes, but when it is needed vasopressin binds to the cell surface vasopressin receptor, activating a signaling pathway that causes the aquaporin 2 containing vesicles to fuse with the plasma membrane so the aquaporin 2 can be used by the cell.

Images



Western blot analysis of Aquaporin 2 in Raoms, Raji lysates using Aquaporin 2 antibody.

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