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Anti-Aquaporin 0 Antibody

Catalog # AP51342

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P30301
Reactivity	Human, Mouse, Rat, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	28122

Additional Information

Gene ID	4284
Other Names	AQP0; Lens fiber major intrinsic protein; Aquaporin-0; MIP26; MP26
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human Aquaporin 0. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

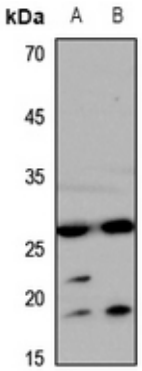
Name	MIP (HGNC:7103)
Synonyms	AQP0
Function	Aquaporins form homotetrameric transmembrane channels, with each monomer independently mediating water transport across the plasma membrane along its osmotic gradient (PubMed:11001937, PubMed:24120416). Specifically expressed in lens fiber cells, this aquaporin is crucial for maintaining lens water homeostasis and transparency. Beyond water permeability, it also acts as a cell-to-cell adhesion molecule, forming thin junctions between lens fiber cells that are essential for maintaining the ordered structure and transparency of the lens (PubMed:24120416).
Cellular Location	Cell membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q6J8I9}. Cell junction {ECO:0000250|UniProtKB:Q6J8I9}. Note=Localizes to thin cell-cell junctions in lens fiber cells. {ECO:0000250|UniProtKB:Q6J8I9}

Tissue Location	Expressed in the cortex and nucleus of the retina lens (at protein level) (PubMed:30790544). Major component of lens fiber gap junctions (PubMed:24120416).

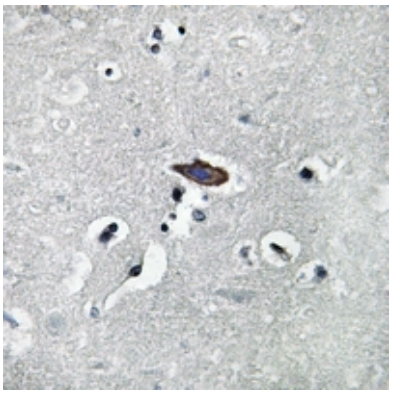
References

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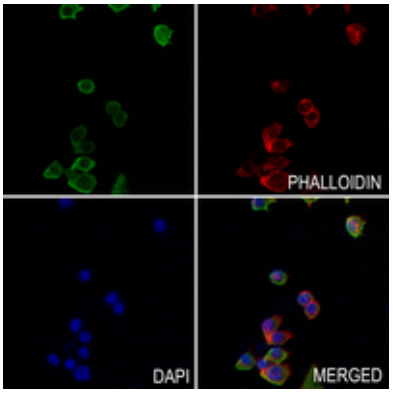
Images



Western blot analysis of Aquaporin 0 expression in mouse liver (A), mouse kidney (B) whole cell lysates. (Predicted band size: 28 kD; Observed band size: 28 kD)



Immunohistochemical analysis of Aquaporin 0 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Aquaporin 0 staining in RAW264.7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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