

Datasheet for 600-401-E91**Aquaporin 3 Antibody****Overview**

Description:	Anti-Aquaporin 3 (RABBIT) Antibody - 600-401-E91
Item No.:	600-401-E91
Size:	100 µL
Applications:	WB, IF
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	Aquaporins selectively conduct water molecules in and out of the cell, while preventing the passage of ions and other solutes. Known as water channels, they are integral membrane pore proteins. Aquaporin 3 is found in the basolateral cell membrane of principal collecting duct cells and provide a pathway for water to exit these cells. AQP3 gene expression is not regulated by vasopressin.
Synonyms:	AQP3, Aquaporin 3 (GIL blood group), GIL, 31.4 kDa water channel protein, Aquaglyceroporin-3
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Aqp3
Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	Aquaporin 3 Antibody was produced from whole rabbit serum prepared by repeated immunizations with a synthetic peptide corresponding to the C-terminal region of rat aquaporin 3.

Purity/Specificity: Anti-Aquaporin 3 Antibody was purified by affinity chromatography. A BLAST analysis was used to suggest cross-reactivity with Aquaporin 3 from Human, Mouse, and Rat based on 100% homology with the immunizing sequence. Other species not yet tested. Cross-reactivity with Aquaporin 3 from other sources has not been determined. Channels and Transporters research.

Relevant Links:

- [NCBI - NP_113891.1](#)
- [GeneID - 65133](#)
- [UniProtKB - P47862](#)

Application Details

Tested Applications:	WB
Suggested Applications:	IF (Based on references)
Application Note:	Anti-Aquaporin 3 Antibody is suitable for use in WB and IF microscopy. Expect a band approximately ~31.5kDa on specific lysates. May detect larger glycosylated bands ~35-50kDa. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IF:	1:200-400
WB:	1:1000-4000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	50% (v/v) Glycerol

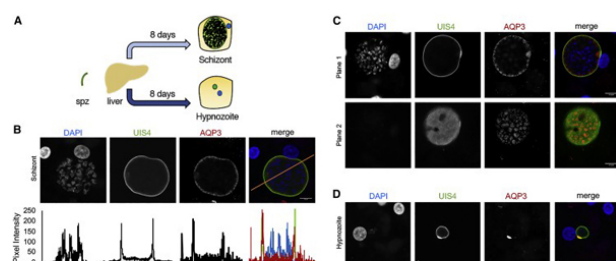
Shipping & Handling

Shipping Condition:	Wet Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Expiration:

Expiration date is one (1) year from date of receipt.

Images



Immunofluorescence Microscopy

Human AQP3 Is Recruited to *P. vivax* Schizonts and Hypnozoites

(A) Schematic of *P. vivax* sporozoite infection of PHH to produce liver schizonts or hypnozoites.

(B) Representative confocal images of a *P. vivax* liver schizont (top) day 8 post-infection into PHH. Cells were stained with DAPI (blue), PvUIS4 (green), and HsAQP3 (red). Colocalization analysis of PvUIS4 and HsAQP3 (bottom).

(C) Representative confocal images of a *P. vivax* liver schizont on day 8 post-infection of PHH at two different focal planes.

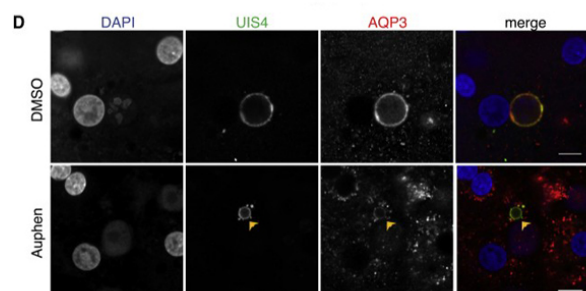
(D) Human AQP3 localization in a representative *P. vivax* hypnozoite day 8 post-infection of PHH. Cells were stained with DAPI (blue), PvUIS4 (green), and HsAQP3 (red). Scale bar, 10 μm.

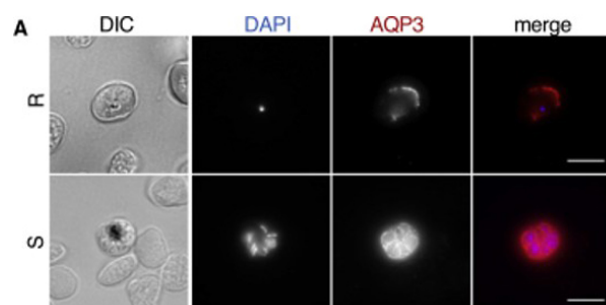
Fig 1. PMID: 32330444

Immunofluorescence Microscopy

(D) Representative confocal images of *P. vivax* parasites on day 8 post-infection of PHH in the absence (top panel) or presence of 0.62 μM auphen (bottom panel). Arrow indicates parasite with AQP3 recruitment after auphen treatment. Cells were stained with DAPI (blue), PvUIS4 (green), and HsAQP3 (red). Scale bar, 10 μm. Fig 3.

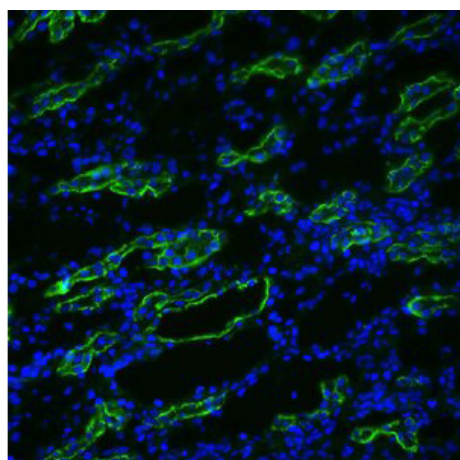
PMID: 32330444





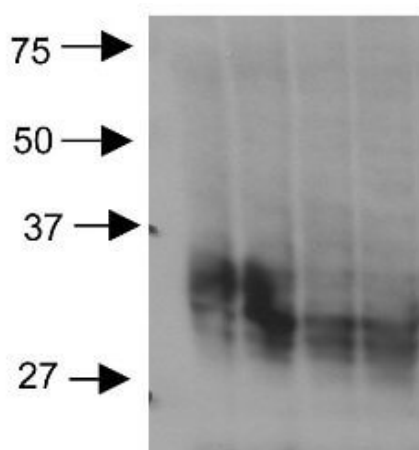
Immunofluorescence Microscopy

(A) Representative images of human AQP3 localization in *P. vivax*-infected reticulocytes during the ring (top panel) and schizont (bottom panel) stages. Cells were stained with DAPI (blue) and HsAQP3 (red). Scale bar, 10 μ m. Fig 4. PMID: 32330444



Immunofluorescence Microscopy

Immunofluorescence Microscopy of Rabbit anti-Aquaporin-3 antibody. Tissue: Rat kidney. Fixation: N/A. Primary Antibody: Aquaporin-3 at 1:200 for 1h at RT. Secondary antibody: Fluorescein rabbit secondary antibody at 1:10,000 for 45 min RT. Localization: Membrane. Staining anti-Aquaporin-3 green fluorescent with DAPI stain merge.



Western Blot

Western Blot of Rabbit anti-Aquaporin-3 Antibody. Lane 1-4: Rat kidney tissues. Load: 20ug per lane. Primary antibody: Aquaporin 3 at 1:2000 for overnight at 4°C. Secondary antibody: Goat anti-rabbit IgG HRP antibody at 1:40,000 for 45 min at RT. Block: 5% Blotto overnight at 4°C. Predicted/Observed size: ~31.5kDa. May detect larger glycosylated bands ~35-50kDa.

References

- Posfai D et al. Plasmodium vivax Liver and Blood Stages Recruit the Druggable Host Membrane Channel Aquaporin-3. *Cell Chem Biol.* (2020)

Disclaimer

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