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

Anti-Aquaporin 2 Antibody

Rabbit polyclonal antibody to Aquaporin 2
Catalog # AP60223

Specification

Anti-Aquaporin 2 Antibody - Product Information

Application	**WB, IF/IC, IHC**
Primary Accession	P41181
Other Accession	P56402
Reactivity	**Human, Mouse, Rat, Pig, Bovine, SARS, Dog**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**28837**

Anti-Aquaporin 2 Antibody - Additional Information

Gene ID 359

Other Names
Aquaporin-2; AQP-2; ADH water channel; Aquaporin-CD; AQP-CD; Collecting duct water channel protein; WCH-CD; Water channel protein for renal collecting duct

Target/Specificity
KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Aquaporin 2. The exact sequence is proprietary.

Dilution
WB~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/100 - 1/500)
IF/IC~~N/A
IHC~~1:100~500

Format
Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

Storage
Store at -20 °C.Stable for 12 months from date of receipt

Anti-Aquaporin 2 Antibody - 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:<a href="http://www.uniprot.org/citations/7510718"

target="_blank">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}

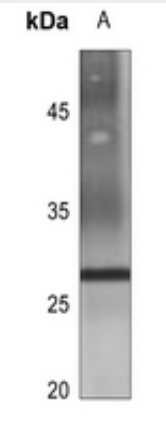
Tissue Location
Expressed in collecting tubules in kidney medulla (at protein level) (PubMed:7510718). Detected in kidney (PubMed:7510718).

Anti-Aquaporin 2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Aquaporin 2 Antibody - Images



Western blot analysis of Aquaporin 2 expression in mouse kidney (A) whole cell lysates.

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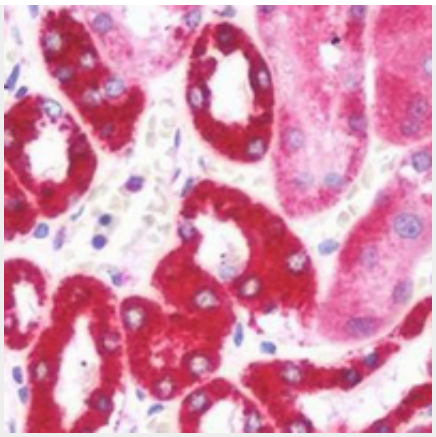
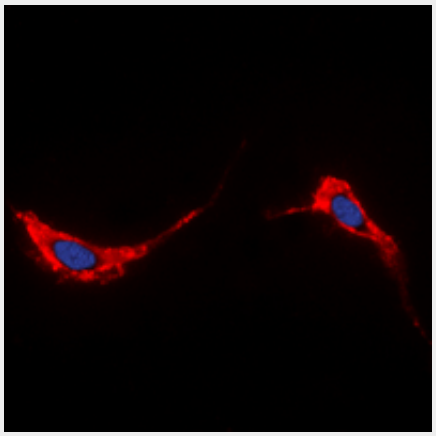


Immunohistochemical analysis of Aquaporin 2 staining in human kidney formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected 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 2 staining in HeLa 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 DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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