

Aquaporin 2 Polyclonal Antibody | anti-AQP2 antibody

Anti-Aquaporin 2 Antibody

CATALOG # AAA46421	REACTIVITY Human, Mouse, Rat	APPLICATIONS Immunohistochemistry, Western Blot
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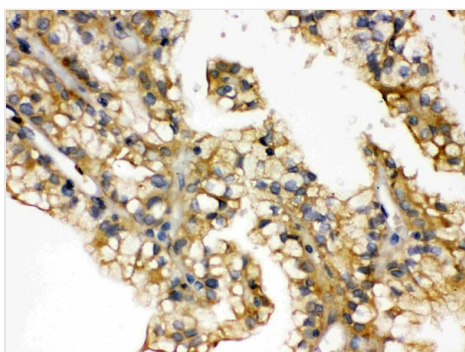
PRODUCT SYNONYMS

Aquaporin 2; Polyclonal Antibody; Anti-Aquaporin 2 Antibody; Aquaporin-2; ADH water channel; AQP 2; AQP CD; AQP-2; AQP-CD; AQP2; AQP2_HUMAN; AQPCD; Aquaporin 2 collecting duct; Aquaporin CD; Aquaporin-CD; Aquaporin2; Aquaporine 2; Collecting duct water channel protein; MGC34501; Water channel aquaporin 2; Water channel protein for renal collecting duct; WCH CD; WCH-CD; WCHCD antibody; aquaporin 2 (collecting duct); anti-AQP2 antibody

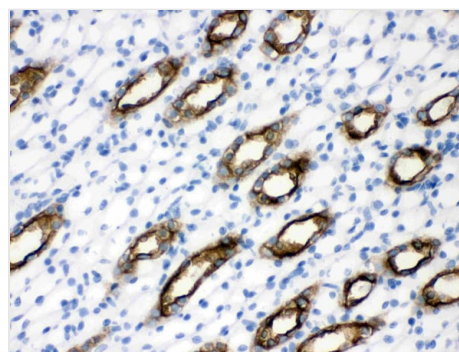
PRODUCT SPECIFICATIONS

Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Purity/Purification	Immunogen Affinity Purified
Form/Format	Lyophilized. Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Sequence Length	271
Applicable Applications for anti-AQP2 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Aquaporin 2 (241-271aa EPDTDWEEREVRRRQSVELHSPQSLPRGTKA), different from the related mouse and rat sequences by one amino acid.
Ig Type	Rabbit IgG
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Preparation and Storage	At -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquoted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

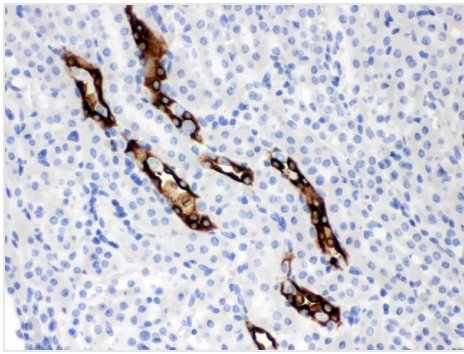
IMAGES


IHC (Immunohistochemistry)

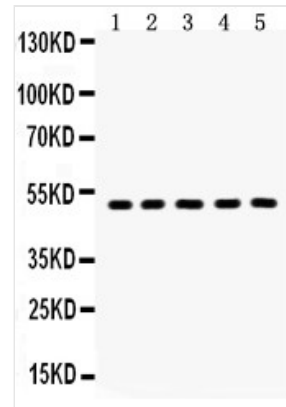
Anti- Aquaporin 2 Picoband antibody, AAA46421, IHC(P)IHC(P): Human Kidney Cancer Tissue


IHC (Immunohistochemistry)

Anti- Aquaporin 2 Picoband antibody, AAA46421, IHC(P)IHC(P): Rat Kidney Tissue



IHC (Immunohistochemistry)
Anti- Aquaporin 2 Picoband antibody, AAA46421, IHC(P)IHC(P): Mouse Kidney Tissue



WB (Western Blot)
Anti- Aquaporin 2 Picoband antibody, AAA46421, Western blottingAll lanes: Anti Aquaporin 2 (AAA46421) at 0.5ug/mlLane 1: Rat Kidney Tissue Lysate at 50ugLane 2: Mouse Kidney Tissue Lysate at 50ugLane 3: HELA Whole Cell Lysate at 40ugLane 4: A549 Whole Cell Lysate at 40ugLane 5: PANC Whole Cell Lysate at 40ugPredicted bind size: 29KDObserved bind size: 50KD

ADDITIONAL INFORMATION

Related Product Information for anti-AQP2 antibody	Description: Rabbit IgG polyclonal antibody for Aquaporin-2(AQP2) detection. Tested with WB, IHC-P in Human;Mouse;Rat. Background: AQP2 (Aquaporin 2), also called AQUAPORIN-CD, is found in the apical cell membranes of the kidney's collecting duct principal cells and in intracellular vesicles located throughout the cell. The AQP2 gene is mapped to chromosome 12q13, very close to the site of major intrinsic protein by situ hybridization. The investigators suggested that a defect in the AQP2 gene is the basis of the autosomal form of nephrogenic diabetes insipidus. The functional expression and the limited localization suggested that AQP2 is the vasopressin-regulated water channel. Using rat kidney slices and porcine kidney cells stably expressing rat Aqp2, AQP2 trafficking can be stimulated by cAMP-independent pathways that utilize nitric oxide (NO). The NO donors sodium nitroprusside (SNP) and NONOate and the NO synthase substrate L-arginine mimicked the effect of vasopressin (VP), stimulating relocation of Aqp2 from cytoplasmic vesicles to the apical plasma membrane. SNP increased intracellular cGMP rather than cAMP, and exogenous cGMP stimulated AQP2 membrane insertion. Atrial natriuretic factor, which signals via cGMP, also stimulated AQP2 translocation. AQP2 expression in kidney connecting tubules is sufficient for survival and that AQP2 expression in collecting ducts is required to regulate body water balance. The S256L substitution in the cytoplasmic tail of the Aqp2 protein prevented phosphorylation at S256 and the subsequent accumulation of Aqp2 on the apical membrane of the collecting duct principal cells.
References	1. Bouley, R., Breton, S., Sun, T., McLaughlin, M., Nsumu, N. N., Lin, H. Y., Ausiello, D. A., Brown, D. Nitric oxide and atrial natriuretic factor stimulate cGMP-dependent membrane insertion of aquaporin 2 in renal epithelial cells. J. Clin. Invest. 106: 1115-1126, 2000. 2. Canfield, M. C., Tamarappoo, B. K., Moses, A. M., Verkman, A. S., Holtzman, E. J. Identification and characterization of aquaporin-2 water channel mutations causing nephrogenic diabetes insipidus with partial vasopressin response. Hum. Molec. Genet. 6: 1865-1871, 1997. 3. Deen, P. M. T., Croes, H., van Aubel, R. A. M. H., Ginsel, L. A., van Os, C. H. Water channels encoded by mutant aquaporin-2 genes in nephrogenic diabetes insipidus are impaired in their cellular routing. J. Clin. Invest. 95: 2291-2296, 1995.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4502179
NCBI GeneID	359
NCBI Accession #	NP_000477.1
NCBI GenBank Nucleotide #	NM_000486.5
UniProt Accession #	P41181; Q9UD68
Molecular Weight	28,837 Da
NCBI Official Full Name	aquaporin-2

NCBI Official Synonym Full Names	aquaporin 2
NCBI Official Symbol	AQP2
NCBI Official Synonym Symbols	AQP-CD; WCH-CD
NCBI Protein Information	aquaporin-2
UniProt Protein Name	Aquaporin-2
UniProt Gene Name	AQP2
UniProt Synonym Gene Names	AQP-2; AQP-CD
UniProt Entry Name	AQP2_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/aquaporin-2-antibody-immunohistochemistry-western-blot-elisa/46421>