

Datasheet for ABIN3030003
anti-AQP2 antibody (AA 245-260)

5 Images

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Overview

Quantity:	100 µg
Target:	AQP2
Binding Specificity:	AA 245-260
Reactivity:	Human, Rat, Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This AQP2 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	Amino acids 245-260 (DWEEREVRRRQSVELH) were used as the immunogen for this AQP2 antibody (100% homologous in human, mouse and rat).
Isotype:	IgG
Purification:	Antigen affinity

Target Details

Target:	AQP2
Alternative Name:	AQP2 Aquaporin 2 (AQP2 Products)
Background:	Aquaporin 2 also called Aquaporin-CD, is found in the apical cell membranes of the kidneys collecting duct principal cells and in intracellular vesicles located throughout the cell. The AQP2

Target Details

gene is mapped to chromosome 12q13, very close to the site of major intrinsic protein by situ hybridization. Investigators suggest that a defect in the 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 Aquaporin 2, 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 Aquaporin 2 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. Expression in kidney connecting tubules is sufficient for survival and that expression in collecting ducts is required to regulate body water balance. The S256L substitution in the cytoplasmic tail of the protein prevented phosphorylation at S256 and the subsequent accumulation of Aquaporin 2 on the apical membrane of the collecting duct principal cells.

UniProt: [P41181](#)

Pathways: [Response to Water Deprivation](#)

Application Details

Application Notes: The stated application concentrations are suggested starting amounts. Titration of the AQP2 antibody may be required due to differences in protocols and secondary/substrate sensitivity.\. Western blot: 0.5-1 µg/mL,IHC (Paraffin): 0.5-1 µg/mL,IHC (Frozen): 0.5-1 µg/mL

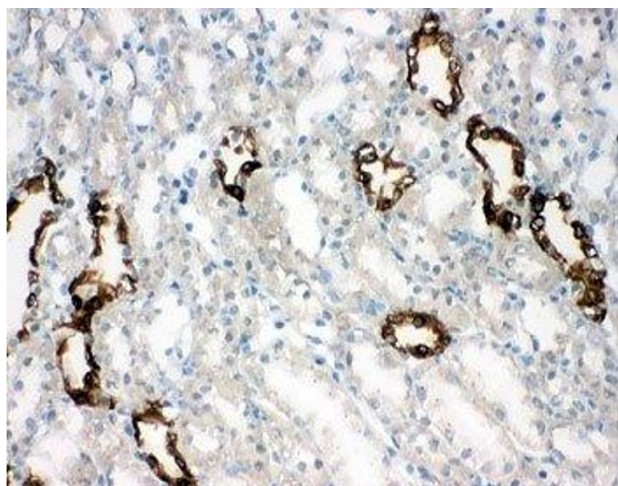
Restrictions: For Research Use only

Handling

Buffer: 0.5 mg/mL if reconstituted with 0.2 mL sterile DI water

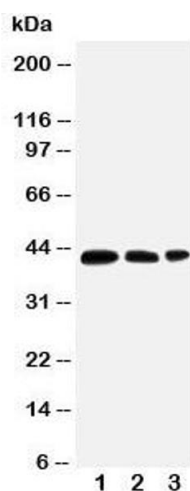
Storage: -20 °C

Storage Comment: After reconstitution, the AQP2 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.



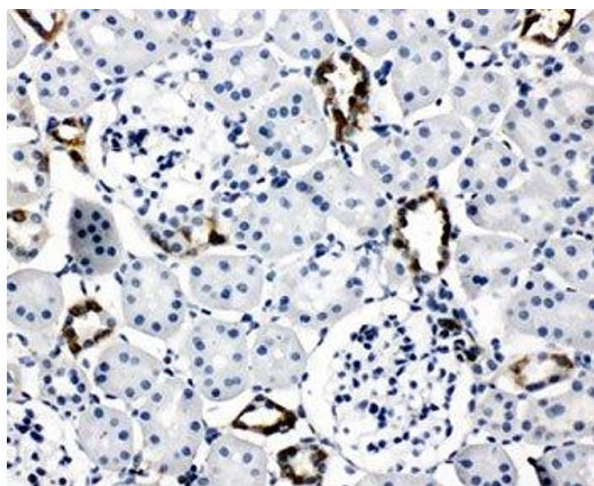
Immunohistochemistry

Image 1. IHC-F testing of AQP2 antibody and rat kidney tissue



Western Blotting

Image 2. Western blot testing of AQP2 antibody and Lane 1: MCF-7; 2: SW620; 3: HT1080 cell lysate. The protein is routinely visualized from 29-44KD depending on glycosylation level.



Immunohistochemistry

Image 3. IHC-P: AQP2 antibody testing of rat kidney tissue

Please check the [product details page](#) for more images. Overall 5 images are available for ABIN3030003.