

## AQP2 (Phospho Ser256) Rabbit pAb

CatalogNo: YP0978

### Key Features

#### Host Species

- Rabbit

#### Reactivity

- Human, Mouse, Rat

#### Applications

- IHC, IF, ELISA

#### MW

- 29kD (Calculated)

#### Isotype

- IgG

### Storage

**Storage\*** -15°C to -25°C/1 year (Do not lower than -25°C)

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

### Recommended Dilution Ratios

**IHC 1:100-1:300**

**ELISA 1:40000**

**IF 1:50-200**

### Basic Information

**Clonality** Polyclonal

### Immunogen Information

**Immunogen** The antiserum was produced against synthesized peptide derived from human Aquaporin 2 around the phosphorylation site of Ser256. AA range:222-271

**Specificity** Phospho-AQP2 (S256) Polyclonal Antibody detects endogenous levels of AQP2 protein only when phosphorylated at S256. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):RQsVE

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## | Target Information

**Gene name** AQP2

**Protein Name** Aquaporin-2

Organism	Gene ID	UniProt ID
Human	<a href="#">359</a> ;	<a href="#">P41181</a> ;
Mouse	<a href="#">11827</a> ;	<a href="#">P56402</a> ;
Rat	<a href="#">25386</a> ;	<a href="#">P34080</a> ;

**Cellular Localization**

Apical cell membrane ; Multi-pass membrane protein . Basolateral cell membrane ; 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 . 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) . .

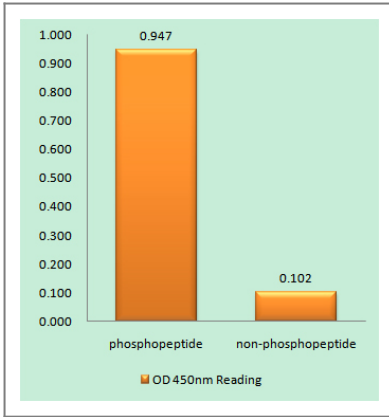
**Tissue specificity** Expressed in collecting tubules in kidney medulla (at protein level) (PubMed:7510718) . Detected in kidney (PubMed:7510718) .

**Function**

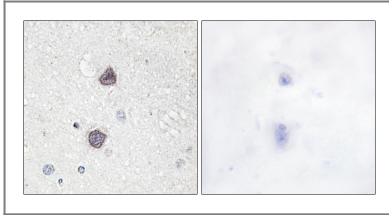
Disease:Defects in AQP2 are the cause of diabetes insipidus nephrogenic autosomal (ANDI) [MIM:125800]; also known as diabetes insipidus nephrogenic type 2. ANDI is caused by the inability of the renal collecting ducts to absorb water in response to arginine vasopressin. It is characterized by excessive water drinking (polydypsia) , excessive urine excretion (polyuria) , persistent hypotonic urine , and hypokalemia. Inheritance can be autosomal dominant or recessive. ,Domain:Aquaporins contain two tandem repeats each containing three membrane-spanning domains and a pore-forming loop with the signature motif Asn-Pro-Ala (NPA) . ,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. ,online information:AQP2 pages ,PTM:Ser-256 phosphorylation is necessary and sufficient for expression at the apical membrane. Endocytosis is not phosphorylation-dependent. ,similarity:Belongs to the MIP/aquaporin (TC 1.A.8) family. ,subcellular location:Shuttles from vesicles to the apical membrane. ,tissue specificity:Expressed in renal collecting tubules. ,

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## | Validation Data



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using Aquaporin 2 (Phospho-Ser256) Antibody



Immunohistochemistry analysis of paraffin-embedded human brain, using Aquaporin 2 (Phospho-Ser256) Antibody. The picture on the right is blocked with the phospho peptide.

## Contact information

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**AQP2 (Phospho Ser256) Rabbit pAb**

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