

Rabbit Anti-AQP2 antibody

SL0261R

Product Name AQP2

Chinese Name 水 Channel protein-2 抗体

Alias ADH water channel; AQP 2; AQP-2; AQP CD; AQPCD; Aquaporin 2 collecting duct; Aquaporin CD; Aquaporin2; Aquaporine 2; Collecting duct water channel protein; MGC34501; Water channel protein for renal collecting duct; WCH CD; WCHCD.

Research Area immunology Signal transduction Channel protein

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, Rat,

Applications WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 30kDa

Cellular localization cytoplasmic The cell membrane

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human AQP2: 101-200/271 <Extracellular>

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed

[PubMed](#)

This gene encodes a water channel protein located in the kidney collecting tubule. It belongs to the MIP/aquaporin family, some members of which are clustered together on chromosome 12q13. Mutations in this gene have been linked to autosomal dominant, and recessive forms of nephrogenic diabetes insipidus.

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.

Subcellular Location:

Apical cell membrane. Cytoplasmic vesicle membrane. Shuttles from vesicles to the apical membrane.

Tissue Specificity:

Expressed in renal collecting tubules.

Post-translational modifications:

Ser-256 phosphorylation is necessary and sufficient for expression at the apical membrane. Endocytosis is not phosphorylation-dependent.

**Product
Detail**

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.

Similarity:

Belongs to the MIP/aquaporin (TC 1.A.8) family.

SWISS:

P41181

Gene ID:

359

Database links:

[Entrez Gene: 359](#) Human

[Entrez Gene: 11827](#) Mouse

[Entrez Gene: 25386](#) Rat

[Omim: 107777](#) Human

[SwissProt: P41181](#) Human

[SwissProt: P56402](#) Mouse

[SwissProt: P34080](#) Rat

[Unigene: 130730](#) Human

[Unigene: 20206](#) Mouse

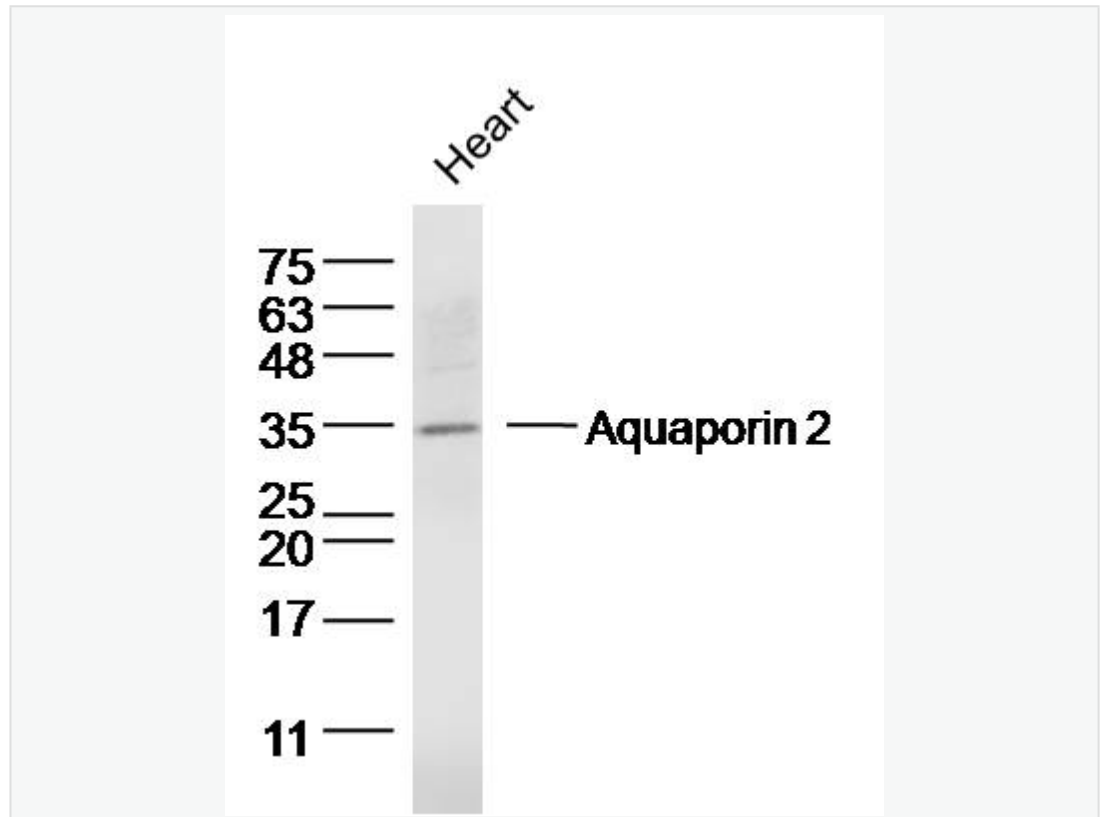
[Unigene: 90076](#) Rat

Channel protein (Channel Protein)

水 Channel protein-2 特异地存在于肾脏集合管,受血管加压素调节。有研究证明, AQP2(水 Channel protein-2)在 Diabetes 肾脏集合管表达增强.

在 1 型 Diabetes 动物模型的水转运中尤其有意义。研究认为: AQP-2 奠定了 Diabetes 大鼠肾脏对水重吸收的基础, 而且发现 1 型 Diabetes 病人的 AQP-2 随血糖控制而减少。

Product
Picture



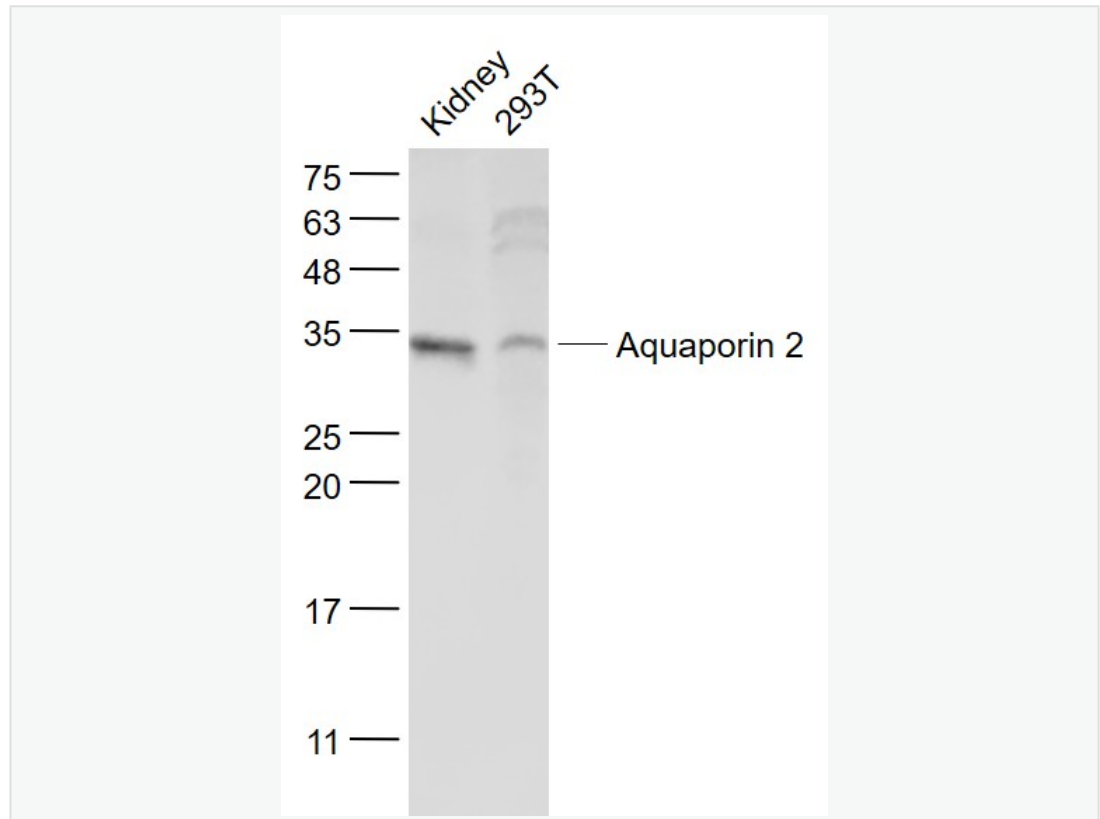
Sample: Heart (Mouse) Lysate at 40 ug

Primary: Anti-Aquaporin 2 (SL0261R) at 1/300 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 30 kD

Observed band size: 35 kD



Sample:

Kidney (Mouse) Lysate at 40 ug

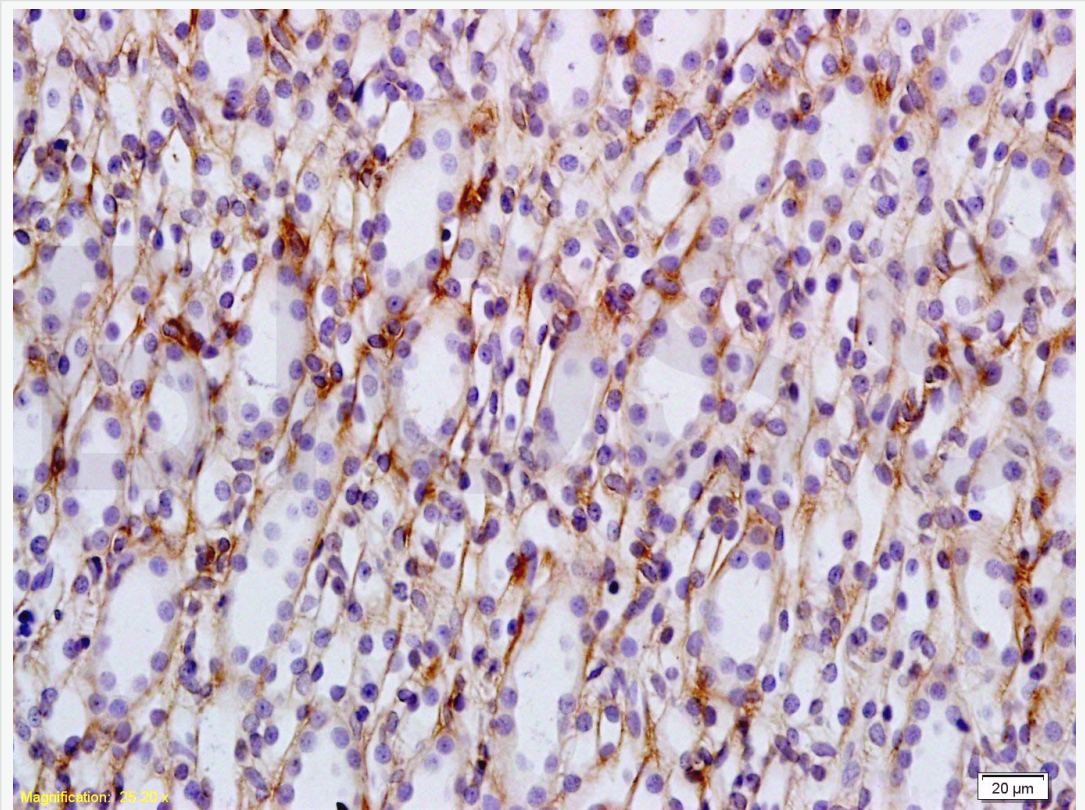
293T(Human) Cell Lysate at 30 ug

Primary: Anti- Aquaporin 2 (SL0261R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 30 kD

Observed band size: 32 kD



Tissue/cell: rat kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-AQP-2 Polyclonal Antibody, Unconjugated(SL0261R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining