

Rabbit Anti-Aquaporin 4 antibody

SL0634R

Product Name Aquaporin 4

Chinese Name 水 Channel protein4 抗体

Alias aquaporin 4; WCH4; Mercurial-insensitive water channel; MIWC; AQP 4; AQP4; Aquaporin4; HMIWC 2; HMIWC2; Mercurial insensitive water channel; MGC22454; MIWC; AQP4_HUMAN; Aquaporin-4; AQP-4.

Research Area Tumour Signal transduction Channel protein The new supersedes the old

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, Rat, (predicted: Pig, Cow, Rabbit, Sheep,)
WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1 μ g /test
(Paraffin sections need antigen repair)

Applications not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 36kDa

Cellular localization The cell membrane

Form Liquid

Concentration 1mg/ml

immunogen KLH conjugated synthetic peptide derived from human AQP4: 271-323/323
<Cytoplasmic>

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 member of the aquaporin family of intrinsic membrane proteins that function as water-selective channels in the plasma membranes of many cells. The encoded protein is the predominant aquaporin found in brain. Two alternatively spliced transcript variants encoding distinct isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Function:

Forms a water-specific channel. Osmoreceptor which regulates body water balance and mediates water flow within the central nervous system.

Subunit:

Homotetramer. Part of a complex containing MLC1, TRPV4, HEPACAM and ATP1B1.

Subcellular Location:

Membrane; Multi-pass membrane protein.

Tissue Specificity:

Brain, muscle, heart, kidney, lung, and trachea.

Similarity:

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

**Product
Detail**

SWISS:

P55087

Gene ID:

361

Database links:

[Entrez Gene: 281008](#) Cow

[Entrez Gene: 361](#) Human

[Entrez Gene: 11829](#) Mouse

[Entrez Gene: 25293](#) Rat

[Omim: 600308](#) Human

[SwissProt: O77750](#) Cow

[SwissProt: P55087](#) Human

[SwissProt: P55088](#) Mouse

[SwissProt: P47863](#) Rat

[Unigene: 281008](#) Cow

[Unigene: 315369](#) Human

[Unigene: 250786](#) Mouse

[Unigene: 90091](#) Rat

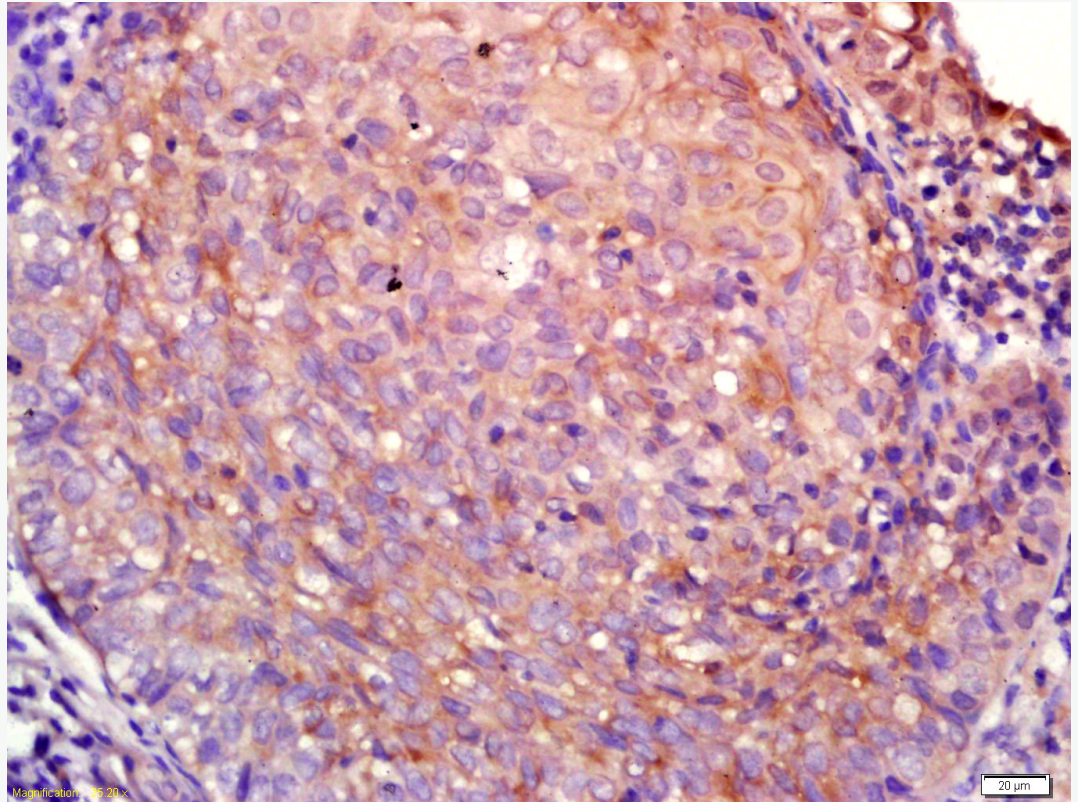
Channel protein (Channel Protein)

水 Channel protein(AQPs)广泛分布于机体不同组织器官中,脑组织中的水 Channel protein 主要为 AQP4.

AQP-4 蛋白主要在星型胶质细胞和室管膜细胞内表达,尤其在于毛细血管和软脑膜直接接触的胶质细胞上及血管周表达丰富.

水 Channel protein4 的分布特点与其功能密切相关,可能是脑脊液重吸收、渗透压调节、脑水肿形成等生理、病理过程的分子生物学基础.研究水 Channel protein4 可为脑水肿及水代谢疾病提供分子水平的理论依据,同时为临床治疗脑水肿及水代谢疾病提供一种新途径.

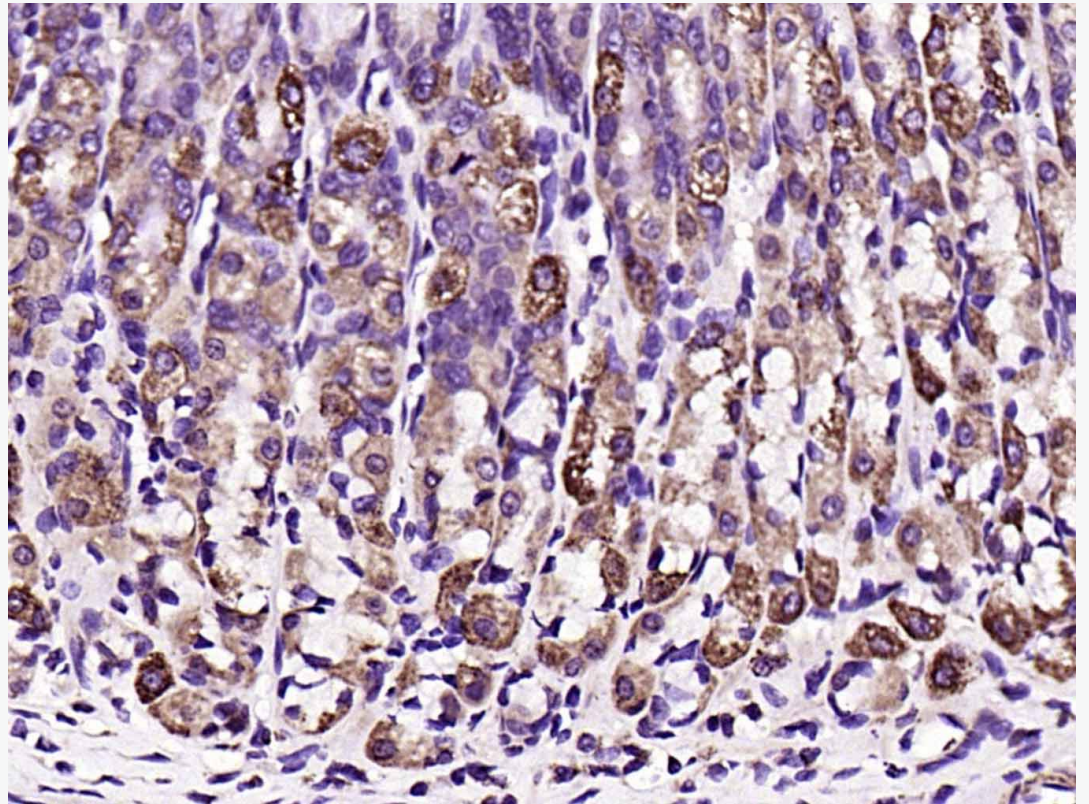
**Product
Picture**



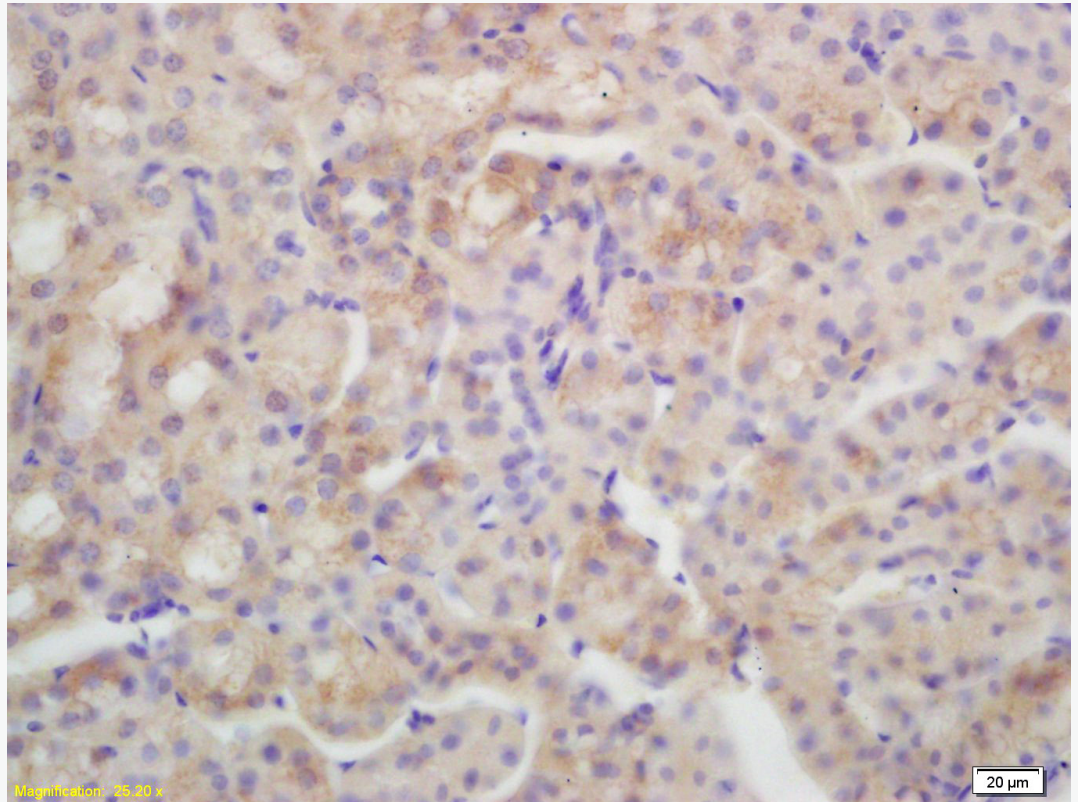
Tissue/cell: human laryngocarcinoma; 4% Paraformaldehyde-fixed and paraffin-embedded;

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-AQP4 Polyclonal Antibody, Unconjugated(SL0634R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

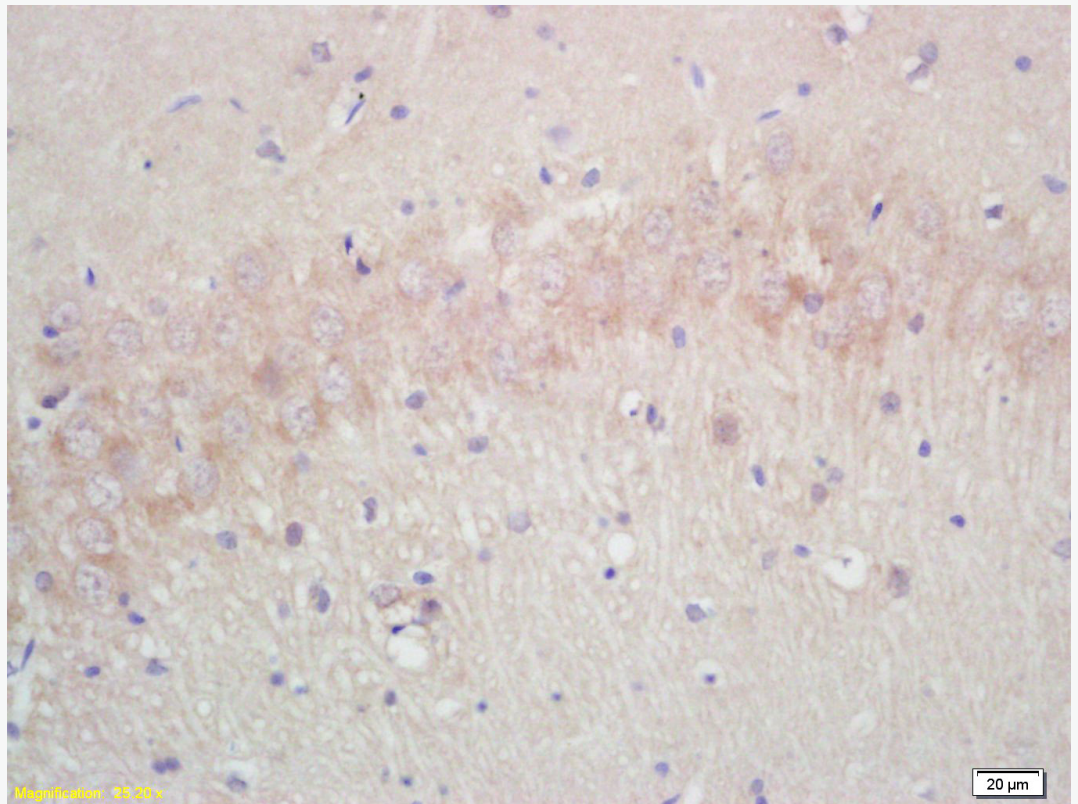


Paraformaldehyde-fixed, paraffin embedded (rat stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Aquaporin 4) Polyclonal Antibody, Unconjugated (SL0634R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

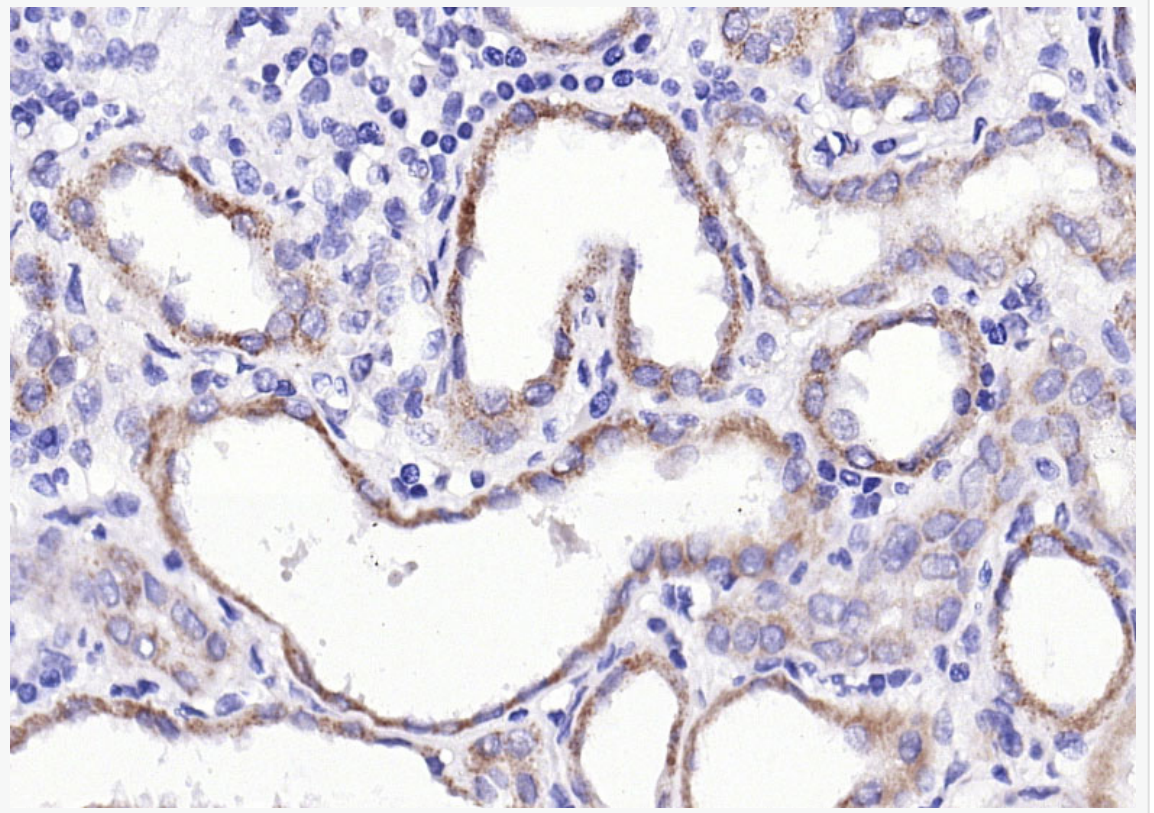


Tissue/cell: mouse kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block
endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal
goat serum,C-0005) at 37°C for 20 min;

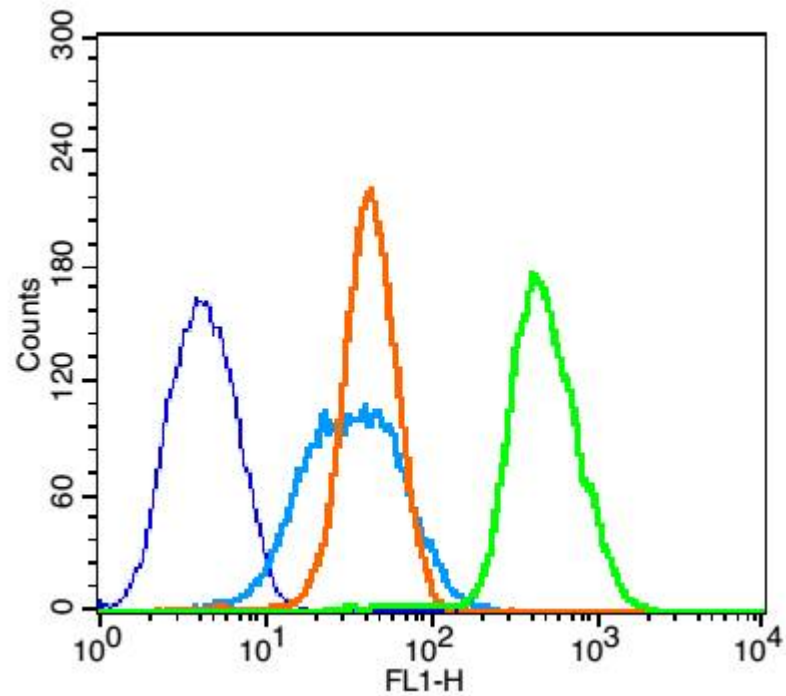
Incubation: Anti-AQP4 Polyclonal Antibody, Unconjugated(SL0634R) 1:200,
overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and
DAB(C-0010) staining



Tissue/cell: rat brain 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-AQP4 Polyclonal Antibody, Unconjugated(SL0634R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Paraformaldehyde-fixed, paraffin embedded (human kidney carcinoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Aquaporin 4) Polyclonal Antibody, Unconjugated (SL0634R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control: K562 (blue).

Primary Antibody: Rabbit Anti-Aquaporin 4 antibody (SL0634R, Green); Dilution: 1 μ g in 100 μ L 1X PBS containing 0.5% BSA;

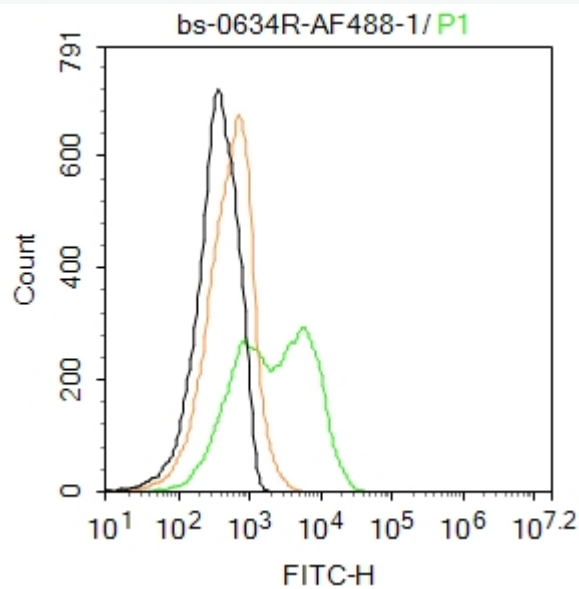
Isotype Control Antibody: Rabbit IgG (orange), used under the same conditions;

Secondary Antibody: Goat anti-rabbit IgG-FITC (white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

Protocol

The cells were fixed with 2% paraformaldehyde for 10 min at 37°C. Primary antibody (SL0634R, 1 μ g / 1x10⁶ cells) were incubated for 30 min at room temperature, followed by 1 X PBS containing 0.5% BSA + 10% goat serum (15min) to block non-specific protein-protein interactions. Then the Goat Anti-rabbit IgG/FITC antibody

was added into the blocking buffer mentioned above to react with the primary antibody at 1/200 dilution for 30 min at room temperature. Acquisition of 20,000 events was performed.



Blank control:Molt4.

Primary Antibody (green line): Rabbit Anti-AQP 4 antibody (SL0634R-A488)

Dilution: 1 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Protocol

The cells were incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. Acquisition of 20,000 events was performed.