# Anti-Aquaporin 4/AQP4 Antibody

**Catalog Number: *A01049***

BOSTER
antibody and ELISA experts
**BOSTER BIOLOGICAL TECHNOLOGY**
Building C21, 3rd to 5th Floors, Optics Valley Biopharmaceutical Accelerator,
East Lake High-Tech Development Zone, Wuhan.
***Web:*** www.boster.com ***Phone:*** 027-67845390/1/2 ***Email:*** boster@boster.com

## Basic Information

| | |
|---|---|
| **Product Name** | Anti-Aquaporin 4/AQP4 Antibody |
| **Gene Name** | AQP4 |
| **Source** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Species Reactivity** | human, mouse, rat |
| **Tested Application** | WB, IHC, FCM, ELISA |
| **Contents** | 500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol. |
| **Immunogen** | E.coli-derived human Aquaporin 4/AQP4 recombinant protein (Position: L247-V323). |
| **Concentration** | 500 ug/ml |
| **Purification** | Immunogen affinity purified. |
| **Observed MW** | 35 kDa |
| **Dilution Ratios** | Western blot (WB): 1:500-2000<br>Immunohistochemistry (IHC): 1:50-400<br>Flow Cytometry (Fixed): 1:50-200<br>Enzyme linked immunosorbent assay (ELISA): 1:100-1000<br>(Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user. |

## Storage

12 months from date of receipt，-20℃ as supplied. 6 months 2 to 8℃ after reconstitution. Avoid repeated freezing and thawing.

## Background Information

Aquaporin 4 is found in the basolateral cell membrane of principal collecting duct cells and provides a pathway for water to exit these cells. The gene of AQP4 is mapped to 18q11.2-q12.1. Similar to other aquaporins, the AQP4 gene is composed of 4 exons encoding 127, 55, 27, and 92 amino acids separated by introns of 0.8, 0.3, and 5.2 kb. Unlike other aquaporins, an alternative coding initiation sequence (designated exon 0) was located 2.7 kb upstream of exon 1. When spliced together, M1 and the subsequent 10 amino acids are encoded by exon 0; the next 11 amino acids and M23 are encoded by exon 1. AQP4 is expressed in astrocytes and is upregulated by direct insult to the central nervous system. And AQP4 is the predominant water channel in the brain and has an important role in brain water homeostasis. It is abundant in mammalian brain and is concentrated in astrocytic foot processes at the blood-brain barrier.

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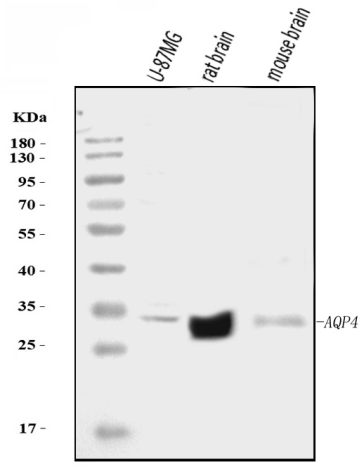
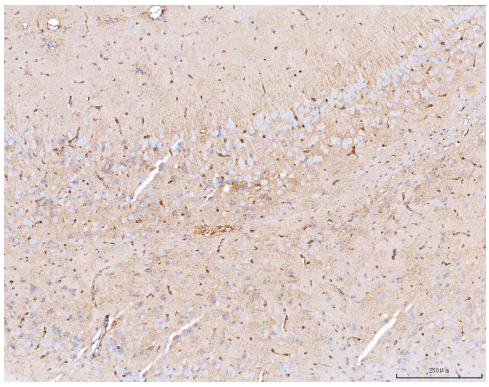
## Reference

Anti-Aquaporin 4/AQP4 Antibody被引用在5文献中。

## Selected Validation Data




Western blot analysis of Aquaporin 4/AQP4 using anti-Aquaporin 4/AQP4 antibody (A01049). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: U87-MG whole cell lysates,
Lane 2: rat brain tissue lysates,
Lane 3: mouse brain tissue lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-Aquaporin 4/AQP4 antigen affinity purified polyclonal antibody (A01049) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for Aquaporin 4/AQP4 at approximately 35 kDa. The expected band size for Aquaporin 4/AQP4 is at 35 kDa.



IHC analysis of Aquaporin 4/AQP4 using anti-Aquaporin 4/AQP4 antibody (A01049).
Aquaporin 4/AQP4 was detected in a paraffin-embedded section of mouse brain tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-Aquaporin 4/AQP4 Antibody (A01049) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.

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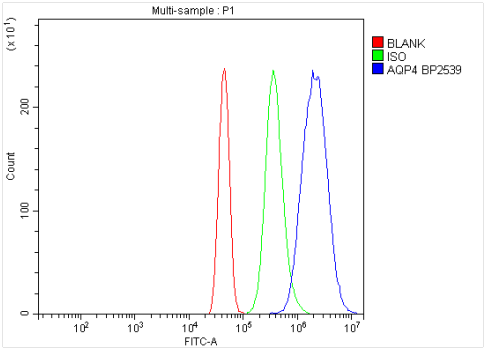


Flow Cytometry analysis of A431 cells using anti-Aquaporin 4/AQP4 antibody (A01049).
Overlay histogram showing A431 cells stained with A01049 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Aquaporin 4/AQP4 Antibody (A01049) at 1:100 dilution for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.