

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	
Contents	500 ug/ml antibody with PBS, 0.02% NaN ₃ , 1 mg/ml BSA and 50% glycerol.	
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Aquaporin 4, different from the related mouse sequence by two amino acids, and from the related rat sequence by three amino acids.	
Concentration	500 ug/ml	
Purification	Immunogen affinity purified.	
Observed MW	35 kDa	
Dilution Ratios	Western blot (WB): 1:1000-5000 Immunohistochemistry (IHC): 1:50-400 (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°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

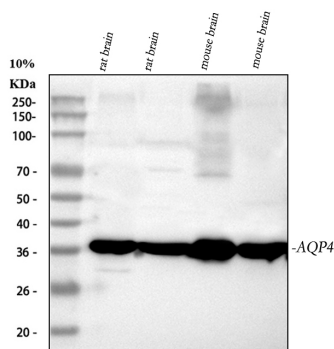
Background Information

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.

Reference

Anti-Aquaporin 4/AQP4 Antibody被引用在8文献中。

Selected Validation Data



Western blot analysis of anti-Aquaporin 4/AQP4 antibody (PB9475).

The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: rat brain tissue lysates,

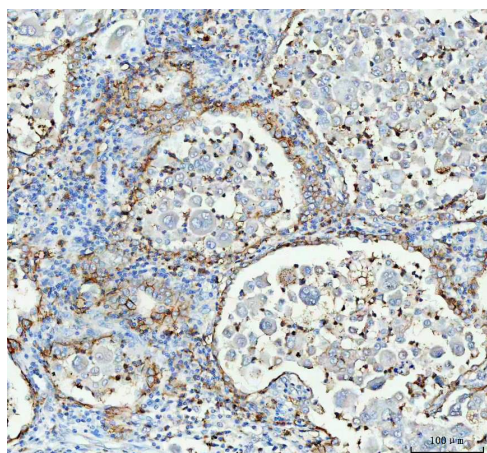
Lane 2: rat brain tissue lysates,

Lane 3: mouse brain tissue lysates,

Lane 4: 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 (PB9475) 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 37 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 (PB9475).

Aquaporin 4/AQP4 was detected in a paraffin-embedded section of human lung cancer tissue. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB (Catalog # AR1027) as the chromogen.