Product Information Sheet

Polyclonal Anti- Aquaporin 4, *AQP4*

Catalogue No. PA1220

Lot No. 09C01

Ig type rabbit IgG

Size 100µg/vial

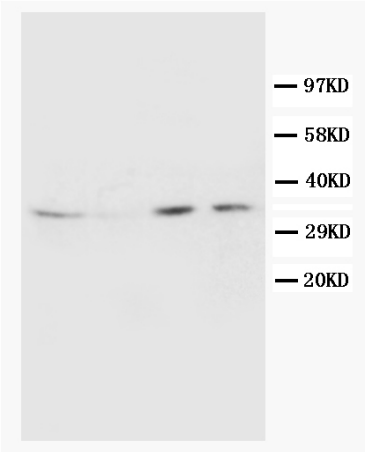
Specificity

Human, mouse, rat.

No cross reactivity with other proteins.

Recommended application

Western blot



Lane 1 : Rat Heart tissue Lysate
Lane 2 : Rat Kidney tissue Lysate
Lane 3 : Rat brain tissue Lysate
Lane 4 : Rat brain tissue Lysate

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminal of human AQP4, identical to the related rat and mouse sequence.

Purity

Immunogen affinity purified.

Application

	Concen-tration	Tested Species	Concluded Species	Antigen Retrieval
WB	1µg/ml	Hu, Rat	Ms	-
IHC-P	-	-	-	-
IHC-F	-	-	-	-
ICC	-	-	-	-

Other applications have not been tested.

Optimal dilutions should be determined by end user.

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg Thimerosal, 0.05mg NaN_3.

Reconstitution

0.2ml of distilled water will yield a concentration of 500µg/ml.

Storage

At -20˚C for one year. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for longer time.

To reorder contact us at:

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BACKGROUND

Aquaporin 4 is found in the basolateral cell membrane of principal collecting duct cells and provide a pathway for water to exit these cells.[1] 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.[2] AQP4 is expressed in astrocytes and is upregulated by direct insult to the central nervous system.[3] 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.[4, 5]

REFERENCE

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3. Nagelhus EA, Mathiisen TM, Ottersen OP (2004). "Aquaporin-4 in the central nervous system: cellular and subcellular distribution and coexpression with KIR4.1". *Neuroscience* 129 (4): 905–13.

4. Amiry-Moghaddam, M.; Otsuka, T.; Hurn, P. D.; Traystman, R. J.; Haug, F.-M.; Froehner, S. C.; Adams, M. E.; Neely, J. D.; Agre, P.; Ottersen, O. P.; Bhardwaj, A. : An alpha-syntrophin-dependent pool of AQP4 in astroglial end-feet confers bidirectional water flow between blood and brain. *Proc. Nat. Acad. Sci.* 100: 2106-2111, 2003.

5. Lennon, V. A.; Kryzer, T. J.; Pittock, S. J.; Verkman, A. S.; Hinson, S. R. : IgG marker of optic-spinal multiple sclerosis binds to the aquaporin-4 water channel. *J. Exp. Med.* 202: 473-477, 2005.