

Anti-Aquaporin 4 Antibody

Our Anti-Aquaporin 4 rabbit polyclonal primary antibody from PhosphoSolutions is produced in-house.

Catalog # AN1315

Specification

Anti-Aquaporin 4 Antibody - Product Information

Primary Accession	P47863
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	34480

Anti-Aquaporin 4 Antibody - Additional Information

Gene ID **25293**

Other Names

AQP 4 antibody, AQP-4 antibody, AQP4 antibody, AQP4_HUMAN antibody, Aquaporin type 4 antibody, Aquaporin-4 antibody, Aquaporin4 antibody, HMIWC 2 antibody, HMIWC2 antibody, Mercurial insensitive water channel antibody, Mercurial-insensitive water channel antibody, MGC22454 antibody, MIWC antibody, WCH 4 antibody, WCH4 antibody

Target/Specificity

Aquaporin-4 (AQP4), a bidirectional water channel protein, is the most expressed aquaporin within the central nervous system. AQP4 is predominantly expressed by astrocytes and ependymal cells within the blood-brain-barrier and ependymal-cerebrospinal fluid barriers (Verkman, et al 2011). AQP4 plays a role in synaptic plasticity (Skucas et al, 2011), astrocyte mitigation (Saadoun et al, 2005), and K⁺ homeostasis (Binder et al, 2006). Due to the significant role AQP4 plays in cognition, it has been reported to be dysregulated in several neurological disorders. Alzheimer's patients have amyloid deposits in the walls of the vasculature known as CAA which causes AQP4 mis-location (Wilcock et al, 2009). Patients with Parkinson's disease have low levels of AQP4 expression which leads to reduced inflammatory response (Chi et al, 2011). Reduced levels of AQP4 in traumatic brain injury affects both the acute stage, decreasing the ability to remove excess water from the brain, and in the later stage, by preventing cellular damage and swelling (Zhang et al, 2015).

Format

Antigen Affinity Purified from Pooled Serum

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Anti-Aquaporin 4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping

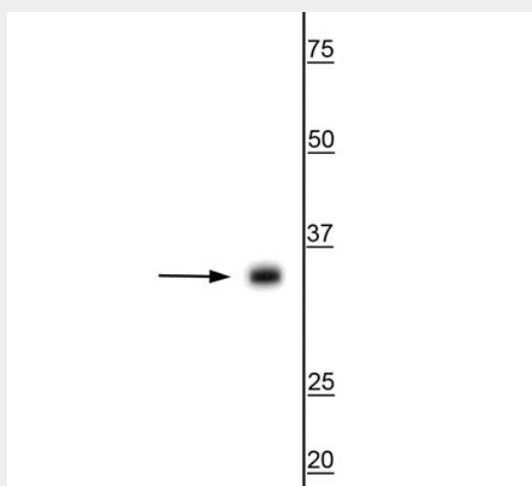
Blue Ice

Anti-Aquaporin 4 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Aquaporin 4 Antibody - Images



Western blot of rat whole brain lysate showing specific immunolabeling of the ~35 kDa AQP4 protein.

Anti-Aquaporin 4 Antibody - Background

Aquaporin-4 (AQP4), a bidirectional water channel protein, is the most expressed aquaporin within the central nervous system. AQP4 is predominantly expressed by astrocytes and ependymal cells within the blood-brain-barrier and ependymal-cerebrospinal fluid barriers (Verkman, et al 2011). AQP4 plays a role in synaptic plasticity (Skucas et al, 2011), astrocyte mitigation (Saadoun et al, 2005), and K⁺ homeostasis (Binder et al, 2006). Due to the significant role AQP4 plays in cognition, it has been reported to be dysregulated in several neurological disorders. Alzheimer's patients have amyloid deposits in the walls of the vasculature known as CAA which causes AQP4 mis-location (Wilcock et al, 2009). Patients with Parkinson's disease have low levels of AQP4 expression which leads to reduced inflammatory response (Chi et al, 2011). Reduced levels of AQP4 in traumatic brain injury affects both the acute stage, decreasing the ability to remove excess water from the brain, and in the later stage, by preventing cellular damage and swelling (Zhang et al, 2015).