

Product datasheet for **TA388992**

Aqp4 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:1000 WB Brain: 1:1000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Synthetic peptide corresponding to amino acid residues from the C-terminal region of rat AQP4, conjugated to keyhole limpet hemocyanin (KLH).
Specificity:	Specific for endogenous levels of the ~35 kDa aquaporin 4 protein.
Formulation:	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.
Concentration:	lot specific
Purification:	Antigen Affinity Purified from Pooled Serum
Conjugation:	Unconjugated
Storage:	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
Stability:	After date of receipt, stable for at least 1 year at -20°C.
Predicted Protein Size:	35
Gene Name:	aquaporin 4
Database Link:	Entrez Gene 25293 Rat P47863



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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).

Synonyms:

AQP-4; aquaporin-4; HMIWC2; MGC22454; MIWC; WCH4

Note:

Prepared from pooled rabbit serum by affinity purification via chromatography on an affinity column prepared with the C-terminal peptide used as antigen.