

AQP4 Polyclonal Antibody

Catalog # AP68475

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	P55087
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	34830

Additional Information

Gene ID	361
Other Names	AQP4; Aquaporin-4; AQP-4; Mercurial-insensitive water channel; MIWC; WCH4
Dilution	WB--Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/5000. Not yet tested in other applications. IHC-P--N/A IF--1:50~200 ICC--N/A E--N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

Protein Information

Name	AQP4
Function	Forms a water-specific channel (PubMed: 19383790 , PubMed: 7559426 , PubMed: 8601457). Plays an important role in brain water homeostasis (PubMed: 37143309). It is involved in glymphatic solute transport and is required for a normal rate of water exchange across the blood brain interface. Required for normal levels of cerebrospinal fluid influx into the brain cortex and parenchyma along paravascular spaces that surround penetrating arteries, and for normal drainage of interstitial fluid along paravenous drainage pathways. Thereby, it is required for normal clearance of solutes from the brain interstitial fluid, including soluble beta-amyloid peptides derived from APP. Plays a redundant role in urinary water homeostasis and urinary concentrating ability (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250 UniProtKB:P55088}; Multi-pass membrane protein. Endosome membrane {ECO:0000250 UniProtKB:P47863}. Cell membrane, sarcolemma; Multi-pass membrane protein. Cell projection {ECO:0000250 UniProtKB:P47863}. Note=Activation of the vasopressin

receptor AVPR1A triggers AQP4 phosphorylation at Ser-180 and promotes its internalization from the cell membrane. Detected on brain astrocyte processes and astrocyte endfeet close to capillaries {ECO:0000250|UniProtKB:P47863}

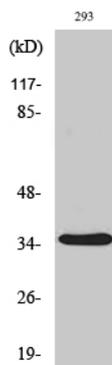
Tissue Location

Detected in skeletal muscle (PubMed:29055082). Detected in stomach, along the glandular base region of the fundic gland (at protein level) (PubMed:8601457). Detected in brain, lung and skeletal muscle, and at much lower levels in heart and ovary (PubMed:7559426, PubMed:8601457).

Background

Forms a water-specific channel. Osmoreceptor which regulates body water balance and mediates water flow within the central nervous system.

Images



Western Blot analysis of various cells using AQP4 Polyclonal Antibody

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