

Aquaporin 4 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50991

Specification

Aquaporin 4 Antibody - Product Information

Application	WB, IP, IHC-P, E
Primary Accession	P55087
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35 KDa

Aquaporin 4 Antibody - Additional Information

Gene ID 361

Other Names

Aquaporin-4, AQP-4, Mercurial-insensitive water channel, MIWC, WCH4, AQP4

Format

0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage

Store at -20 °C. Stable for 12 months from date of receipt

Aquaporin 4 Antibody - 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).

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](#)

Aquaporin 4 Antibody - Images

Aquaporin 4 Antibody - Background

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

Aquaporin 4 Antibody - References

Yang B.,et al.J. Biol. Chem. 270:22907-22913(1995).
Misaka T.,et al.FEBS Lett. 381:208-212(1996).
Lu M.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:10908-10912(1996).
Nusbaum C.,et al.Nature 437:551-555(2005).
Lanciotti A.,et al.Hum. Mol. Genet. 21:2166-2180(2012).