

AQP4 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50937

Specification

AQP4 Antibody - Product Information

Application	WB
Primary Accession	P55087
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35,32 KDa
Antigen Region	231-280

AQP4 Antibody - Additional Information

Gene ID 361

Other Names

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

Dilution

WB~~ 1:500

Format

Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 52% glycerol

Storage

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

AQP4 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

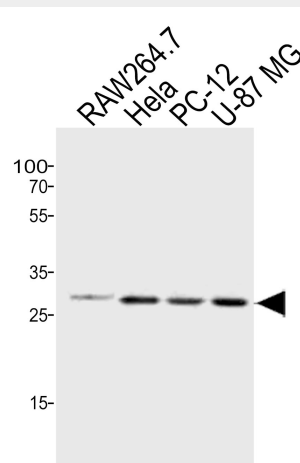
Detected in skeletal muscle (PubMed:29055082). Detected in stomach, along the glandular base region of the fundic gland (at protein level) (PubMed:8601457). Detected in brain, lung and skeletal muscle, and at much lower levels in heart and ovary (PubMed:7559426, PubMed:8601457).

AQP4 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](#)

AQP4 Antibody - Images



Western blot analysis of lysates from mouse RAW264.7, HeLa, rat PC-12, U-87 MG cell line (from left to right), using AQP4 Antibody(A1-0092). A1-0092 was diluted at 1:500 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

AQP4 Antibody - Background

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

AQP4 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).

AQP4 Antibody - Citations

- [Atorvastatin ameliorates early brain injury through inhibition of apoptosis and ER stress in a rat model of subarachnoid hemorrhage.](#)