

AQP8 (14-Z): sc-81870



The Power to Question

BACKGROUND

Human AQP8 (aquaporin 8) is a 261 amino acid protein that contains six membrane-spanning domains, two conserved asn-pro-ala (NPA) motifs, which are characteristic of MIP (major intrinsic protein) family members, and three N-linked glycosylation sites. Aquaporins (AQPs) are a large family of integral membrane water transport channel proteins that facilitate the transport of water through the cell membrane. This function is conserved in animals, plants and bacteria. Many isoforms of aquaporin have been identified in mammals, designated AQPO through AQP10. Aquaporins are widely distributed and it is not uncommon for more than one type of AQP to be present in the same cell. Although most aquaporins are only permeable to water, AQP3, AQP7, AQP9 and one of the two AQP10 transcripts are also permeable to urea and glycerol. Aquaporins are involved in renal water absorption, generation of pulmonary secretions, lacrimation, and the secretion and reabsorption of cerebrospinal fluid and aqueous humor.

REFERENCES

1. Ma, T., et al. 1996. cDNA cloning and gene structure of a novel water channel expressed exclusively in human kidney: evidence for a gene cluster of aquaporins at chromosome locus 12q13. *Genomics* 35: 543-550.
2. Koyama, N., et al. 1998. Cloning and functional expression of human aquaporin8 cDNA and analysis of its gene. *Genomics* 54: 169-172.
3. Echevarria, M., et al. 1998. Aquaporins. *J. Physiol. Biochem.* 54: 107-118.

CHROMOSOMAL LOCATION

Genetic locus: AQP8 (human) mapping to 16p12.1; Aqp8 (mouse) mapping to 7 F3.

SOURCE

AQP8 (14-Z) is a mouse monoclonal antibody raised against recombinant AQP8 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AQP8 (14-Z) is recommended for detection of AQP8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AQP8 siRNA (h): sc-42369, AQP8 siRNA (m): sc-42370, AQP8 shRNA Plasmid (h): sc-42369-SH, AQP8 shRNA Plasmid (m): sc-42370-SH, AQP8 shRNA (h) Lentiviral Particles: sc-42369-V and AQP8 shRNA (m) Lentiviral Particles: sc-42370-V.

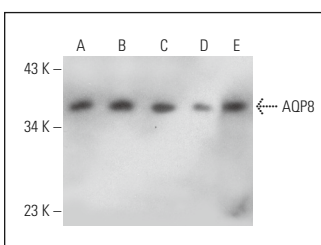
Molecular Weight of AQP8: 34 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, F9 cell lysate: sc-2245 or AQP8 (m): 293T Lysate: sc-126431.

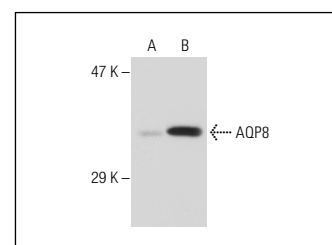
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



AQP8 (14-Z): sc-81870. Western blot analysis of AQP8 expression in HeLa (A), IMR-32 (B), Caco-2 (C), F9 (D) and PC-12 (E) whole cell lysates.



AQP8 (14-Z): sc-81870. Western blot analysis of AQP8 expression in non-transfected: sc-117752 (A) and mouse AQP8 transfected: sc-126431 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Qi, H., et al. 2009. Expression of aquaporin 8 is diversely regulated by osmotic stress in amnion epithelial cells. *J. Obstet. Gynaecol. Res.* 35: 1019-1025.
2. Pellavio, G., et al. 2017. Regulation of aquaporin functional properties mediated by the antioxidant effects of natural compounds. *Int. J. Mol. Sci.* 18: 2665.
3. Griffith, O.W., et al. 2019. Endometrial recognition of pregnancy occurs in the grey short-tailed opossum (*Monodelphis domestica*). *Proc. Biol. Sci.* 286: 20190691.
4. Capiglioni, A.M., et al. 2020. Data of ureagenesis from ammonia, glutamine and alanine, and mitochondrial aquaporin-8 expression in thioacetamide-treated hepatocytes. *Data Brief* 30: 105632.
5. Barile, B., et al. 2023. AQP4-independent TRPV4 modulation of plasma membrane water permeability. *Front. Cell. Neurosci.* 17: 1247761.
6. Cai, J., et al. 2024. The metabolic pathway of bile secretion is vulnerable to salmonella enterica exposure in porcine intestinal epithelial cells. *Animals* 14: 789.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.