

AQP6 (FL-293): sc-28626

BACKGROUND

AQP6 (also designated AQP2L) is a 282 amino acid protein that localizes to intracellular membranes in renal epithelia. 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 AQP0 through AQP10. Aquaporins are widely distributed; it is not uncommon for more than one type of AQP to be present in the same cell. Although most aquaporins are permeable only 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. AQP6 may contribute to glomerular filtration, tubular endocytosis and acid-base metabolism.

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. Echevarria, M., et al. 1998. Aquaporins. *J. Physiol. Biochem.* 54: 107-118.
3. Yasui, M., et al. 1999. Rapid gating and anion permeability of an intracellular aquaporin. *Nature* 402: 184-187.
4. Yasui, M., et al. 1999. Aquaporin 6: an intracellular vesicle water channel protein in renal epithelia. *Proc. Natl. Acad. Sci. USA* 96: 5808-5813.
5. Beitz, E., et al. 1999. The mammalian aquaporin water channel family: a promising new drug target. *Curr. Med. Chem.* 6: 457-467.
6. Online Mendelian Inheritance in Man, OMIM[™]. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 601383. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: AQP6 (human) mapping to 12q13.12; Aqp6 (mouse) mapping to 15 F1.

SOURCE

AQP6 (FL-293) is a rabbit polyclonal antibody raised against amino acids 1-150 mapping at the N-terminus of AQP6 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

AQP6 (FL-293) is recommended for detection of AQP6 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); may cross-react with other Aquaporin family members.

Molecular Weight of AQP6 monomer: 30 kDa.

Molecular Weight of AQP6 dimer: 55 kDa.

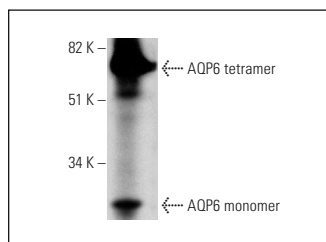
Molecular Weight of AQP6 tetramer: 75 kDa.

Positive Controls: human kidney extract: sc-363764, rat kidney extract: sc-2394 or CCD-1064Sk cell lysate: sc-2263.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



AQP6 (FL-293): sc-28626. Western blot analysis of AQP6 expression in human kidney tissue extract.

RESEARCH USE

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