

AQP7 (R-101): sc-28625

BACKGROUND

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 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. Human AQP7 is a 342 amino acid protein that facilitates water, glycerol and urea transport, and is predominately expressed in adipose tissue.

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. Kuriyama, H., et al. 1997. Molecular cloning and expression of a novel human aquaporin from adipose tissue with glycerol permeability. *Biochem. Biophys. Res. Commun.* 241: 53-58.

CHROMOSOMAL LOCATION

Genetic locus: AQP7 (human) mapping to 9p13.3; Aqp7 (mouse) mapping to 4 A5.

SOURCE

AQP7 (R-101) is a rabbit polyclonal antibody raised against amino acids 169-269 mapping at the C-terminus of AQP7 of rat origin.

PRODUCT

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

APPLICATIONS

AQP7 (R-101) is recommended for detection of AQP7 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).

Suitable for use as control antibody for AQP7 siRNA (h): sc-42367, AQP7 siRNA (m): sc-42368, AQP7 shRNA Plasmid (h): sc-42367-SH, AQP7 shRNA Plasmid (m): sc-42368-SH, AQP7 shRNA (h) Lentiviral Particles: sc-42367-V and AQP7 shRNA (m) Lentiviral Particles: sc-42368-V.

Molecular Weight (predicted) of AQP7: 37 kDa.

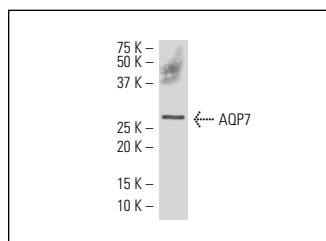
Molecular Weight (observed) of AQP7: 23-33 kDa.

Positive Controls: rat testis extract: sc-2400.

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



AQP7 (R-101): sc-28625. Western blot analysis of AQP7 expression in rat testis tissue extract.

SELECT PRODUCT CITATIONS

1. Tritto, S., et al. 2007. Osmotic water permeability of rat intestinal brush border membrane vesicles: involvement of aquaporin-7 and aquaporin-8 and effect of metal ions. *Biochem. Cell Biol.* 85: 675-684.
2. Hermo, L., et al. 2008. Membrane domain specificity in the spatial distribution of aquaporins 5, 7, 9, and 11 in efferent ducts and epididymis of rats. *J. Histochem. Cytochem.* 56: 1121-1135.
3. Laforenza, U., et al. 2010. Solute transporters and aquaporins are impaired in celiac disease. *Biol. Cell* 102: 457-467.

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.

MONOS
Satisfaction
Guaranteed

Try **AQP7 (D-12): sc-376407**, our highly recommended monoclonal alternative to AQP7 (R-101).