

AQP5 (G-19): sc-9890



The Power to Question

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. AQP2 is the only water channel that is activated by vasopressin to enhance water reabsorption in the kidney collecting duct. Aquaporins are involved in renal water absorption, generation of pulmonary secretions, lacrimation, and the secretion and reabsorption of cerebrospinal fluid and aqueous humor. In the lung, AQP5 is responsible for the majority of water transport across the apical membrane of type I alveolar epithelial cells.

CHROMOSOMAL LOCATION

Genetic locus: AQP5 (human) mapping to 12q13.12; Aqp5 (mouse) mapping to 15 F1.

SOURCE

AQP5 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AQP5 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9890 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AQP5 (G-19) is recommended for detection of AQP5 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).

AQP5 (G-19) is also recommended for detection of AQP5 in additional species, including bovine.

Suitable for use as control antibody for AQP5 siRNA (h): sc-29717, AQP5 siRNA (m): sc-29718, AQP5 shRNA Plasmid (h): sc-29717-SH, AQP5 shRNA Plasmid (m): sc-29718-SH, AQP5 shRNA (h) Lentiviral Particles: sc-29717-V and AQP5 shRNA (m) Lentiviral Particles: sc-29718-V.

Molecular Weight of AQP5: 35 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214.

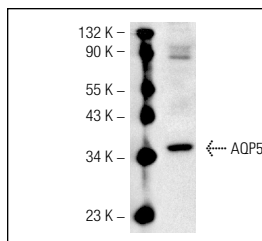
STORAGE

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

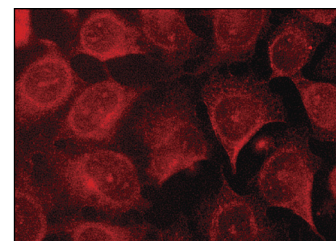
RESEARCH USE

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

DATA



AQP5 (G-19): sc-9890. Western blot analysis of AQP5 expression in KNRK whole cell lysate.



AQP5 (G-19): sc-9890. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

- Palestini, P., et al. 2003. Compositional changes in lipid microdomains of air-blood barrier plasma membranes in pulmonary interstitial edema. *J. Appl. Physiol.* 95: 1446-1452.
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- Hu, Z., et al. 2009. NDST1-dependent heparan sulfate regulates BMP signaling and internalization in lung development. *J. Cell Sci.* 122: 1145-1154.
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- Teymoortash, A., et al. 2012. Variations in the expression and distribution pattern of AQP5 in acinar cells of patients with sialadenosis. *In Vivo* 26: 951-955.
- Banerjee, E.R., et al. 2012. Human embryonic stem cells differentiated to lung lineage-specific cells ameliorate pulmonary fibrosis in a xenograft transplant mouse model. *PLoS ONE* 7: e33165.
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