

AQP2 (E13-21): sc-47710

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 and 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.

CHROMOSOMAL LOCATION

Genetic locus: AQP2 (human) mapping to 12q13.12; Aqp2 (mouse) mapping to 15 F1.

SOURCE

AQP2 (E13-21) is a mouse monoclonal antibody raised against the C-terminus of AQP2 of rat origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AQP2 (E13-21) is available conjugated to either Alexa Fluor[®] 546 (sc-47710 AF546) or Alexa Fluor[®] 594 (sc-47710 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-47710 AF680) or Alexa Fluor[®] 790 (sc-47710 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

AQP2 (E13-21) is recommended for detection of AQP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for AQP2 siRNA (h): sc-42363, AQP2 siRNA (m): sc-42364, AQP2 shRNA Plasmid (h): sc-42363-SH, AQP2 shRNA Plasmid (m): sc-42364-SH, AQP2 shRNA (h) Lentiviral Particles: sc-42363-V and AQP2 shRNA (m) Lentiviral Particles: sc-42364-V.

Molecular Weight of unglycosylated AQP2: 29 kDa.

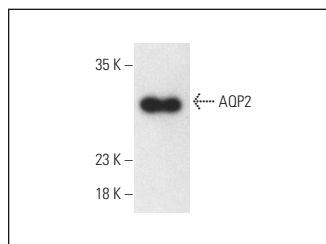
Molecular Weight of mature AQP2: 35-45 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, rat kidney extract: sc-2394 or COLO 320DM cell lysate: sc-2226.

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) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



AQP2 (E13-21): sc-47710. Western blot analysis of human recombinant AQP2 fusion protein. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Martinerie, L., et al. 2009. Low renal mineralocorticoid receptor expression at birth contributes to partial aldosterone resistance in neonates. *Endocrinology* 150: 4414-4424.
2. Disset, A., et al. 2009. Tissue compartment analysis for biomarker discovery by gene expression profiling. *PLoS ONE* 4: e7779.
3. Matsui, I., et al. 2018. Cardiac hypertrophy elevates serum levels of fibroblast growth factor 23. *Kidney Int.* 94: 60-71.
4. Nakamura, S., et al. 2020. LC3 lipidation is essential for TFEB activation during the lysosomal damage response to kidney injury. *Nat. Cell Biol.* 22: 1252-1263.

RESEARCH USE

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

PROTOCOLS

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