SANTA CRUZ BIOTECHNOLOGY, INC.

AQP8 (N-17): sc-14982

The Power to Question

BACKGROUND

Human AQP8 (aquaporin 8) is a 261 amino acid protein that contains 6 membrane-spanning domains, 2 conserved asn-pro-ala (NPA) motifs, which are characteristic of MIP (major intrinsic protein) family members, and 3 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 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.

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.

CHROMOSOMAL LOCATION

Genetic locus: AQP8 (human) mapping to 16p12.1.

SOURCE

AQP8 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of AQP8 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-14982 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AQP8 (N-17) is recommended for detection of AQP8 of 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), immunohistochemistry (including paraffin-embedded sections) (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 AQP8 siRNA (h): sc-42369, AQP8 shRNA Plasmid (h): sc-42369-SH and AQP8 shRNA (h) Lentiviral Particles: sc-42369-V.

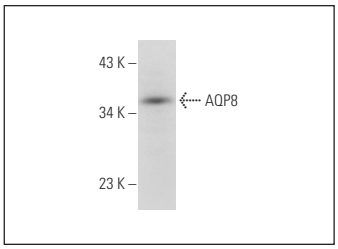
Molecular Weight of AQP8: 34 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

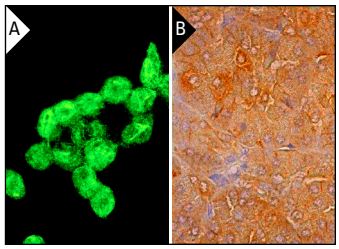
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



AQP8 (N-17): sc-14982. Western blot analysis of AQP8 expression in HeLa nuclear extract.



AQP8 (N-17): sc-14982. Immunofluorescence staining of methanol-fixed MIA PaCa-2 cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing membrane and cytoplasmic staining of exocrine glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Larocca, M.C., et al. 2009. Knockdown of hepatocyte aquaporin 8 by RNA interference induces defective bile canalicular water transport. Am. J. Physiol. Gastrointest. Liver Physiol. 296: G93-G100.

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.

PROTOCOLS

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