SANTA CRUZ BIOTECHNOLOGY, INC.

AQP9 (F-17): sc-14988

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Human AQP9 (Aquaporin 9) is a 295 amino acid protein that allows passage of a wide variety of noncharged solutes and stimulates osmotic water permeability. 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.

CHROMOSOMAL LOCATION

Genetic locus: AQP9 (human) mapping to 15q21.3; Aqp9 (mouse) mapping to 9 D.

SOURCE

AQP9 (F-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AQP9 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-14988 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AQP9 (F-17) is recommended for detection of AQP9 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).

AQP9 (F-17) is also recommended for detection of AQP9 in additional species, including canine.

Suitable for use as control antibody for AQP9 siRNA (h): sc-42371, AQP9 siRNA (m): sc-42372, AQP9 shRNA Plasmid (h): sc-42371-SH, AQP9 shRNA Plasmid (m): sc-42372-SH, AQP9 shRNA (h) Lentiviral Particles: sc-42371-V and AQP9 shRNA (m) Lentiviral Particles: sc-42372-V.

Molecular Weight of AQP9: 33 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HL-60 whole cell lysate: sc-2209 or rat liver extract: sc-2395.

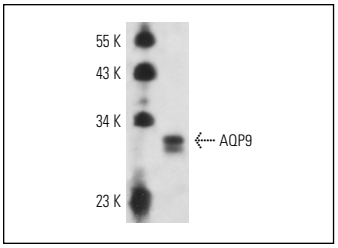
STORAGE

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

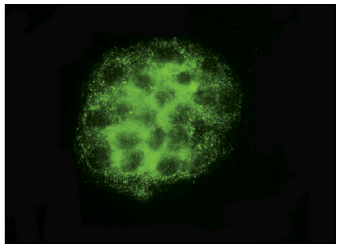
RESEARCH USE

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

DATA



AQP9 (F-17): sc-14988. Western blot analysis of human recombinant AQP9.



AQP9 (F-17): sc-14988. Immunofluorescence staining of methanol-fixed Hep G2 cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Gao, H., et al. 2006. Localization of aquaporin 1 water channel in glial cells of the human peripheral nervous system. Glia 53: 783-787.
2. Dibas, A., et al. 2007. Stress-induced changes in neuronal aquaporin 9 (AQP9) in a retinal ganglion cell-line. Pharmacol. Res. 55: 378-384.
3. Matsumura, K., et al. 2007. Aquaporin 7 is a β-cell protein and regulator of intraislet glycerol content and glycerol kinase activity, β-cell mass, and insulin production and secretion. Mol. Cell. Biol. 27: 6026-6037.
4. Wellejus, A., et al. 2008. Expression of aquaporin 9 in rat liver and efferent ducts of the male reproductive system after neonatal diethylstilbestrol exposure. J. Histochem. Cytochem. 56: 425-432.
5. Prat, C., et al. 2011. Ontogeny of aquaporins in human fetal membranes. Biol. Reprod. 86: 48.
6. Yang, M.H., et al. 2013. Changes in retinal aquaporin-9 (AQP9) expression in glaucoma. Biosci. Rep. E-published.

PROTOCOLS

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