SANTA CRUZ BIOTECHNOLOGY, INC.

AQP9 (G-3): sc-74409

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 (G-3) is a mouse monoclonal antibody raised against amino acids 179-218 mapping within an internal region of AQP9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AQP9 (G-3) is available conjugated to agarose (sc-74409 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74409 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74409 PE), fluorescein (sc-74409 FITC), Alexa Fluor® 488 (sc-74409 AF488), Alexa Fluor® 546 (sc-74409 AF546), Alexa Fluor® 594 (sc-74409 AF594) or Alexa Fluor® 647 (sc-74409 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74409 AF680) or Alexa Fluor® 790 (sc-74409 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

AQP9 (G-3) is recommended for detection of AQP9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 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.

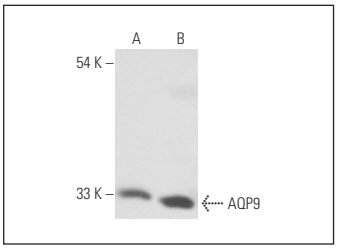
Molecular Weight of AQP9: 33 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, rat liver extract: sc-2395 or human brain extract: sc-364375.

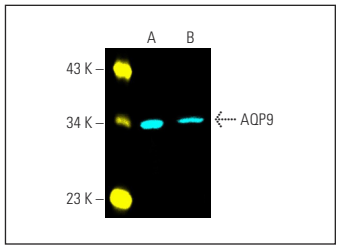
STORAGE

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

DATA



AQP9 (G-3): sc-74409. Western blot analysis of AQP9 expression in HL-60 (**A**) whole cell lysate and rat liver (**B**) tissue extract.



AQP9 (G-3) Alexa Fluor® 647: sc-74409 AF647. Direct fluorescent western blot analysis of AQP9 expression in U-87 MG whole cell lysate (**A**) and human brain tissue extract (**B**). Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 488: sc-516790.

SELECT PRODUCT CITATIONS

1. Yoshino, Y., et al. 2011. Contribution of aquaporin 9 and multidrug resistance-associated protein 2 to differential sensitivity to arsenite between primary cultured chorion and amnion cells prepared from human fetal membranes. Toxicol. Appl. Pharmacol. 257: 198-208.
2. Lindskog, C., et al. 2016. A systematic characterization of aquaporin-9 expression in human normal and pathological tissues. J. Histochem. Cytochem. 64: 287-300.
3. Pellavio, G., et al. 2017. Regulation of aquaporin functional properties mediated by the antioxidant effects of natural compounds. Int. J. Mol. Sci. 18: 2665.
4. Lv, Y., et al. 2018. AQP9 promotes astrocytoma cell invasion and motility via the Akt pathway. Oncol. Lett. 16: 6059-6064.
5. Choi, Y.S., et al. 2019. Potential roles of aquaporin 9 in the pathogenesis of endometriosis. Mol. Hum. Reprod. 25: 373-384.
6. Zheng, X., et al. 2020. Aquaporin-9, mediated by IGF2, suppresses liver cancer stem cell properties via augmenting ROS/β-catenin/FOXO3a signaling. Mol. Cancer Res. 18: 992-1003.
7. Abdalla, Y., et al. 2021. Effectiveness of porous silicon nanoparticle treatment at inhibiting the migration of a heterogeneous glioma cell population. J. Nanobiotechnology 19: 60.
8. Ribeiro, J.C., et al. 2022. CFTR modulates aquaporin-mediated glycerol permeability in mouse Sertoli cells. Cell. Mol. Life Sci. 79: 592.
9. Lin, C., et al. 2023. Osmotic pressure induces translocation of aquaporin-8 by P38 and JNK MAPK signaling pathways in patients with functional constipation. Dig. Liver Dis. E-published.

RESEARCH USE

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