SANTA CRUZ BIOTECHNOLOGY, INC.

AQP10 (C-20): sc-66322

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AQP10 (aquaporin 10) is expressed in human duodenum and jejunum. 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. AQP10 has 2 isoforms and they differ in the presence of a 475 nucleotide insertion that causes a translational frame shift. The result is the existence of a short and long form of AQP10, each with a distinct carboxy terminus. The shorter isoform (translated with the insertion) localizes to the capillary endothelium in villi of the small intestine. The longer isoform (translated without the insertion) localizes to GEP (gastro-entero-pancrestic) endocrine cells. Although most aquaporins are only permeable to water, AQP3, AQP7, AQP9 and the longer AQP10 transcript, are also permeable to urea and glycerol.

REFERENCES

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3. Ishibashi, K., et al. 2002. Cloning and identification of a new member of water channel (AQP10) as an aquaglyceroporin. Biochim. Biophys. Acta 1576: 335-340.
4. Wang, W., et al. 2003. Aquaporin expression in developing human teeth and selected orofacial tissues. Calcif. Tissue Int. 72: 222-227.
5. Mobasheri, A., et al. 2004. Immunohistochemical localization of aquaporin 10 in the apical membranes of the human ileum: a potential pathway for luminal water and small solute absorption. Histochem. Cell Biol. 121: 463-471.
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7. Li, H., et al. 2005. Expression and localization of two isoforms of AQP10 in human small intestine. Biol. Cell 97: 823-829.
8. Gade, W., et al. 2006. A brief survey of aquaporins and their implications for renal physiology. Clin. Lab. Sci. 19: 70-79.
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CHROMOSOMAL LOCATION

Genetic locus: AQP10 (human) mapping to 1q21.3.

SOURCE

AQP10 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AQP10 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-66322 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AQP10 (C-20) is recommended for detection of AQP10 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 AQP10 siRNA (h): sc-61986, AQP10 shRNA Plasmid (h): sc-61986-SH and AQP10 shRNA (h) Lentiviral Particles: sc-61986-V.

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) 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.

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.