**BACKGROUND**

In skeletal muscle, AQP4 (aquaporin 4 also known as mercurial insensitive water channel), localizes to the sarcolemma of fast-twitch muscle fibers. 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. 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: AQP4 (human) mapping to 18q11.2; Aqp4 (mouse) mapping to 18 A1.

**SOURCE**

AQP4 (4/18) is a mouse monoclonal antibody raised against amino acids 301-318 of intracellular AQP4 of rat origin.

**PRODUCT**

Each vial contains 200 µg IgG3 in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

AQP4 (4/18) is available conjugated to agarose (sc-32739 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; and to either phycoerythrin (sc-32739 PE), fluorescein (sc-32739 FITC), Alexa Fluor® 488 (sc-32739 AF488) or Alexa Fluor® 647 (sc-32739 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

**APPLICATIONS**

AQP4 (4/18) is recommended for detection of AQP4 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).


Molecular Weight of AQP4: 34 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or T98G cell lysate: sc-2294.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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