



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

MOUSE ANTI AQUAPORIN 4

With HRP-conjugated secondary antibody

Catalog No.
DS-MB-00094

Species:
Human

Isotype:
Mouse IgG1

Description

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.

Applications

Table Summary of antibody applications and working conditions

Options Functions	YES	NO	Not determined	Recommended Work dilution or concentration
ELISA	•			1:1000-1:20000
Western Blotting	•			1:1000-1:20000
Immunohistology - frozen	•			1/100
Immunohistology - paraffin	•			1/100*
Immunohistology - resin			•	
Immunoprecipitation	•			1:1000-1:20000
Flow Cytometry			•	
Immunofluorescence staining			•	
Neutralization			•	

Note: Other applications are not tested yet. Optimal dilutions should be determined by each laboratory for each application.

*This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH6.0 is recommended for this purpose.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Preparation

Immunogen was synthetic peptide corresponding to amino acids 301-318 of rat aquaporin 4. This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with the immunogen. The IgG fraction of tissue culture supernatant was purified by Protein G affinity chromatography.

Specificity

DS-MB-00094 recognizes an epitope within the cytoplasmic domain of the water-specific channel aquaporin 4 (also known as AQP4). Aquaporin 4 is located in various tissues including the gastro intestinal tract, kidney and brain.

Reconstitution

Supplied as 100µg of purified antibody and its approximate protein concentration is 1.0mg/ml. **Please avoid freeze-thaw cycles.**

Secondary Antibody Applications

<div>Options</div> <div>Functions</div>	YES	NO	Not determined	Recommended Work dilution or concentration
Immunoassay (ELISA, Western blot)	.			1:5000-1:10000

Storage

Store at -20⁰C, if not intended for use within a month. Keep it at 4⁰C and minimize freezing and thawing when use.

Reference

Bodis, B. *et al.* (2001) Active water selective channels in the stomach: investigation of aquaporins after ethanol and capsaicin treatment in rats. *J. Physiol.* 95: 271 - 275.

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