



# Magic™ Mouse Anti-Human AQP4 Monoclonal antibody, clone BRQ52 (DMAB-CS24594)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Specificity</b>	Human AQP4
<b>Target</b>	Human AQP4
<b>Isotype</b>	IgG
<b>Source/Host</b>	Mouse
<b>Species Reactivity</b>	Human
<b>Clone</b>	BRQ52
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	ELISA(Det), LFIA, CLIA, TINIA, POCT We recommend the following antibodies for sandwich immunoassay (Capture - Detection): DMAB-CS24593 - DMAB-CS24594
<b>Format</b>	Liquid
<b>Size</b>	1 mg
<b>Buffer</b>	Supplied as a 0.2 µM filtered solution of PBS, PH7.4.
<b>Preservative</b>	None
<b>Storage</b>	Store at -20°C to -80°C under sterile conditions. Avoid repeated freeze-thaw cycles.

## BACKGROUND

## Introduction

Aquaporin-4 is a multi-pass membrane protein that forms a water-specific channel and serves as an osmoreceptor that regulates body water balance and mediates water flow within the central nervous system. Its extracellular domains are localized to amino acids 58-64, 137-155, and 206-231; its transmembrane domains are in amino acids 37-57, 65-85, 116-136, 156-176, 185-205, and 232-252; and the cytoplasmic domain is in amino acids 1-36, 86-115, 177-184, and 253-323. Aquaporin-4 is largely expressed in the brain and the skeletal muscle and at lower levels in heart, kidney, and lung tissue. Phosphorylation of Aquaporin-4 at Serine 180 by protein kinase C is shown to reduce conductance by about 50%, whereas phosphorylation at Serine 111 by protein kinase G in response to glutamate can increase conductance by about 40%. Two isoforms of Aquaporin-4 have been described that are produced by alternative splicing. Antibodies to Aquaporin-4 can serve as useful serum markers to distinguishing neuromyelitis optica (NMO) from multiple sclerosis. Clone mECD is shown to induce clustering and internalization of Aquaporin-4 and cause its redistribution, which is also observed with NMOIgG. Exposure to mECD antibody is also shown to cause coaggregation of astrocytic CD28B and Aquaporin-4.

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## Keywords

AQP4; aquaporin 4; MIWC; HMIWC2; MLC4; WCH4; hAQP4

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