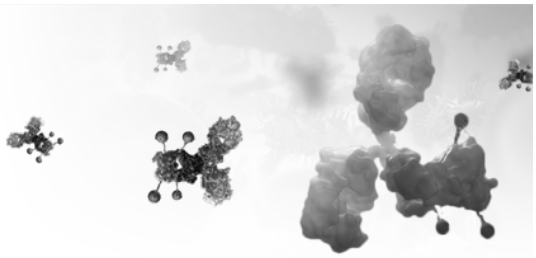

# Magic™ Human Anti-Human AQP4 Monoclonal antibody, clone BRQ54 (DMAB-CS24596)

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

## PRODUCT INFORMATION

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|---|---|
| **Specificity** | Human AQP4 |
| **Target** | Human AQP4 |
| **Isotype** | IgG1 |
| **Source/Host** | Human |
| **Species Reactivity** | Human |
| **Clone** | BRQ54 |
| **Conjugate** | Unconjugated |
| **Applications** | ELISA(Det), LFIA, CLIA,TINIA, POCT<br>We recommend the following antibodies for sandwich immunoassay (Capture - Detection):<br>DMAB-CS24595 - DMAB-CS24596 |
| **Format** | Liquid |
| **Size** | 1 mg |
| **Buffer** | Supplied as a 0.2 μM filtered solution of PBS, PH7.4. |
| **Preservative** | None |
| **Storage** | Store at -20°C to -80°C under sterile conditions. Avoid repeated freeze-thaw cycles. |

## BACKGROUND

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|---|---|
| **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 Aquporin-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. |
| **Keywords** | AQP4; aquaporin 4; MIWC; HMIWC2; MLC4; WCH4; hAQP4 |

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