



Magic™ Human Anti-Human AQP4 Monoclonal antibody, clone BRQ53 (DMAB-CS24595)

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

PRODUCT INFORMATION

Specificity	Human AQP4
Target	Human AQP4
Isotype	IgG1
Source/Host	Human
Species Reactivity	Human
Clone	BRQ53
Conjugate	Unconjugated
Applications	ELISA(Cap), LFIA, CLIA, TINIA, POCT We recommend the following antibodies for sandwich immunoassay (Capture - Detection): 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

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.

Keywords

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