

anti-Human, Mouse Aquaporin 4 Antibody | anti-AQP4 antibody

Anti-Aquaporin 4 [D15107]

CATALOG # AAA72339	REACTIVITY Human, Mouse	APPLICATIONS Immunoprecipitation, Flow Cytometry, Functional Assay, ELISA
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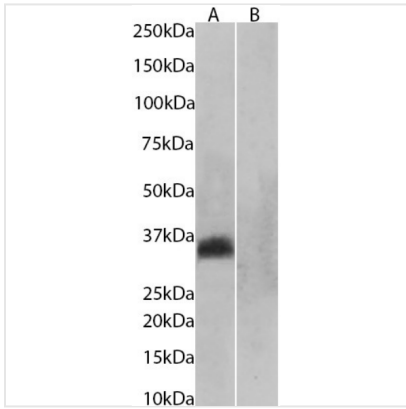
PRODUCT SYNONYMS

Aquaporin 4; Anti-Aquaporin 4 [D15107]; AQP4; AQP-4; Aquaporin-4; MIWC; WCH4; Mercurial-insensitive water channel; anti-AQP4 antibody

PRODUCT SPECIFICATIONS

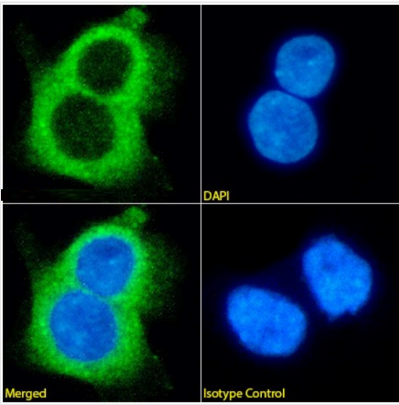
Reactivity	Human, Mouse
Isotype	Mouse IgG2a kappa
Clone Number	D15107
Specificity	This antibody recognizes and binds the extracellular domains of both the M1 and M23 isoforms of human aquaporin 4 (AQP4). It also binds the M23 isoform of mouse aquaporin 4, and does not recognize the M1 isoform of mouse aquaporin 4. AQP4 is a water channel expressed on astrocytes throughout the CNS and in skeletal muscle and some epithelial cells outside of the CNS. It plays an important role in brain water homeostasis and in glymphatic solute transport. Neuromyelitis optica spectrum disorder (NMOSD) is an inflammatory disease of the central nervous system (CNS) that is associated with demyelination and neurological deficits in optic nerve, spinal cord and brainstem. Most NMOSD patients are seropositive for IgG autoantibodies (NMO-IgG) directed against extracellular epitopes of aquaporin-4 (AQP4). Prevention of the binding of NMO-IgG, therefore, may alleviate the disease.
Purity/Purification	Protein A affinity purified
Form/Format	PBS with 0.02% Proclin 300.
Concentration	1mg/ml (varies by lot)
Applicable Applications for anti-AQP4 antibody	IA (Inhibition Assay), IP (Immunoprecipitation), FCM/FACS (Flow Cytometry), ELISA
Immunogen	The original antibody was generated by immunizing an aquaporin 4 knock out mice with human AQP4 as an immunogen expressed on the surface of baculovirus.
Preparation and Storage	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

IMAGES



WB (Western Blot)

Western blot using anti-Aquaporin 4 antibody D15107 . Unboiled (A) and boiled (B) mouse skeletal muscle tissue lysates (35ug protein in RIPA buffer) were resolved via SDS-PAGE, and the subsequent blots were probed with the chimeric rabbit version of D15107 at 1ug/ml before detection using an anti-rabbit secondary antibody. A primary incubation of 1 hour was used, and proteins were detected by chemiluminescence.



IF (Immunofluorescence)

Immunofluorescence staining of A431 cells with anti-Aquaporin 4 antibody D15107 . Immunofluorescence analysis of paraformaldehyde fixed A431 cells on Shi-fix™ coverslips stained with anti-Aquaporin 4 antibody D15107 (1:100 dilution) for 1h followed by Alexa Fluor 488 secondary antibody (1:1000 dilution), showing cytoplasmic staining. The nuclear stain is DAPI (blue). Panels show, from left-right, top-bottom,, DAPI, merged channels, and an isotype control. The isotype control was an unknown specificity antibody followed by staining with Alexa Fluor 488 secondary antibody.

ADDITIONAL INFORMATION

Product Categories/Family for anti-AQP4 antibody	neuromyelitis optica; NMO; neuroinflammatory disease; inflammatory disease; central nervous system; CNS
References	Miyazaki et al. J Neuroimmunol. 2013 Jul 15;260(1-2):107-16.

NCBI AND UNIPROT INFORMATION

NCBI GI #	2506859
NCBI GeneID	361
UniProt Accession #	P55087; P78564
NCBI Official Full Name	Aquaporin-4
NCBI Official Synonym Full Names	aquaporin 4
NCBI Official Symbol	AQP4
NCBI Official Synonym Symbols	MIWC; HMIWC2
NCBI Protein Information	aquaporin-4; WCH4; aquaporin type4; aquaporin 4 isoform delta4; mercurial-insensitive water channel
UniProt Protein Name	Aquaporin-4
UniProt Gene Name	AQP4
UniProt Synonym Gene Names	AQP-4; MIWC
UniProt Entry Name	AQP4_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.