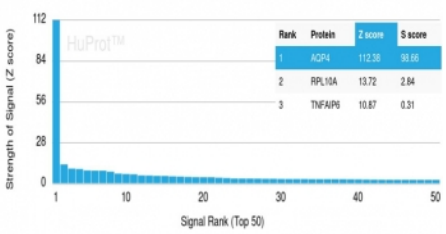
AQP4 Antibody / Aquaporin 4 [clone AQP4/3322] (V5749)

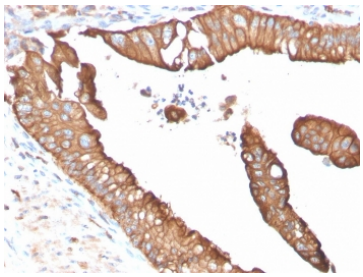
Catalog No.	Formulation	Size
V5749-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5749-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5749SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

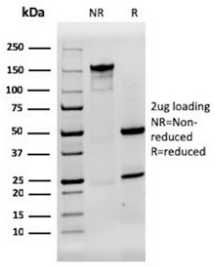
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	AQP4/3322
Purity	Protein G affinity
UniProt	P55087
Localization	Cell membrane, cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This AQP4 antibody is available for research use only.



Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using AQP4 antibody (clone AQP4/3322). These results demonstrate the foremost specificity of the AQP4/3322 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



IHC staining of FFPE human small intestine tissue with AQP4 antibody (clone AQP4/3322). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free AQP4 antibody (clone AQP4/3322) as confirmation of integrity and purity.

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 AQP0through 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.

Application Notes

Optimal dilution of the AQP4 antibody should be determined by the researcher.

Immunogen

A human partial recombinant protein (from within amino acids 200-323) was used as the immunogen for the AQP4 antibody.

Storage

Aliquot the AQP4 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.