

## Datasheet: MCA2099

**BATCH NUMBER 163072**

<b>Description:</b>	MOUSE ANTI AQUAPORIN 1
<b>Specificity:</b>	AQUAPORIN 1
<b>Other names:</b>	AQP1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	1/A5F6
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.1 mg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			■	
Immunohistology - Frozen	■			1/500 - 1/1000
Immunohistology - Paraffin (1)	■			1/500 - 1/1000
ELISA	■			1/1000 - 1/20000
Immunoprecipitation			■	
Western Blotting	■			1/1000 - 1/5000
Immunofluorescence	■			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

**(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.**

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	<p>Reacts with: Mouse, Rat, Rabbit</p> <p><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.</p>

<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.1% Sodium Azide (NaN <sub>3</sub> ) 0.1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Synthetic peptide corresponding to amino acids 249-269 of aquaporin 1.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P29972</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">358</a>    AQP1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	CHIP28
<b>RRID</b>	AB_2056838
<b>Fusion Partners</b>	Spleen cells from immunized Balb/c mice were fused with the cells of the Sp-2/0 Ag14 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human aquaporin 1 antibody, clone 1/A5F6</b> recognizes an epitope within the cytoplasmic domain of the water-specific channel aquaporin 1, also known as AQP1 or CHIP-28.</p> <p>Aquaporin 1 is a ~28 kDa integral membrane protein which was originally identified in red blood cells and the kidney. AQP1 is also expressed by the choroid plexus and various other tissues. The glycosylated forms of AQP1 range between 40-60 kDa.</p>
<b>Histology Positive Control Tissue</b>	Kidney
<b>References</b>	<ol style="list-style-type: none"> <li>1. Nagy G <i>et al.</i> (2002) Development and characterisation of a monoclonal antibody family against aquaporin 1 (AQP1) and aquaporin 4 (AQP4). <a href="#">Pathol Oncol Res. 8 (2): 115-24.</a></li> <li>2. Bódis, B. <i>et al.</i> (2001) Active water selective channels in the stomach: investigation of aquaporins after ethanol and capsaicin treatment in rats. <a href="#">J Physiol Paris. 95 (1-6): 271-5.</a></li> <li>3. Francone, V.P. <i>et al</i> (2010) Signaling from the secretory granule to the nucleus: Uhmk1 and PAM. <a href="#">Mol Endocrinol. 24: 1543-58.</a></li> <li>4. Felszeghy, S. <i>et al</i> (2004) Expression of aquaporin isoforms during human and mouse tooth development. <a href="#">Arch Oral Biol. 49: 247-57.</a></li> <li>5. Ripoche, P. <i>et al.</i> (2004) Human Rhesus-associated glycoprotein mediates facilitated</li> </ol>

- transport of NH<sub>3</sub> into red blood cells. [Proc Natl Acad Sci U S A. 101: 17222-7.](#)
6. Lupp, A. *et al.* (2010) Immunohistochemical identification of the PTHR1 parathyroid hormone receptor in normal and neoplastic human tissues. [Eur J Endocrinol. 162: 979-86.](#)
7. Pannabecker, T.L. *et al.* (2008) Quantitative analysis of functional reconstructions reveals lateral and axial zonation in the renal inner medulla. [Am J Physiol Renal Physiol. 294: F1306-14.](#)
8. Thiele, S. *et al.* (2007) A disruptive mutation in exon 3 of the GNAS gene with albright hereditary osteodystrophy, normocalcemic pseudohypoparathyroidism, and selective long transcript variant Gsalpha-L deficiency. [J Clin Endocrinol Metab. 92: 1764-8.](#)
9. Antonelou, M.H. *et al.* (2011) Oxidative stress-associated shape transformation and membrane proteome remodeling in erythrocytes of end stage renal disease patients on hemodialysis. [J Proteomics. 74: 2441-52.](#)
10. Arnaud, L. *et al.* (2010) A functional AQP1 allele producing a Co(a-b-) phenotype revises and extends the Colton blood group system. [Transfusion. 50: 2106-16.](#)
11. Saison, C. *et al.* (2012) A new AQP1 null allele identified in a Gypsy woman who developed an anti-CO3 during her first pregnancy. [Vox Sang. 103: 137-44.](#)
12. Ferré-Dolcet, L. *et al.* (2019) Uterine and placental specific localization of AQP2 and AQP8 is related with changes of serum progesterone levels in pregnant queens. [Theriogenology. 142: 149-57.](#)
13. Hsu, K. *et al.* (2017) Adaptable interaction between aquaporin-1 and band 3 reveals a potential role of water channel in blood CO<sub>2</sub> transport. [FASEB J. 31 \(10\): 4256-64.](#)

<b>Storage</b>	<p>This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	<p>Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2099">https://www.bio-rad-antibodies.com/SDS/MCA2099</a></p> <p>10041</p>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight®488</a> , <a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> ,

	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>

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'M383472:210513'

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