

Aquaporin 3 Antibody

Affinity purified polyclonal antibody
 Catalog # AG1046

Specification

Aquaporin 3 Antibody - Product Information

Application	WB, IHC
Primary Accession	P47862
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	31384
Homology	Mouse - 17/18 amino acid residues identical; sheep, human - 15/18 amino acid residues identical.

Aquaporin 3 Antibody - Additional Information

Gene ID
 65133

Other Names
 Aquaporin-3, AQP-3, 314 kDa water channel protein, Aquaglyceroporin-3, Aqp3

Related products for control experiments

Control peptide antigen (supplied with the antibody free of charge).

Target/Specificity

Peptide (C)STEAENVKLAHMKHKEQI, corresponding to amino acid residues 275-292 of rat AQP3 (Accession # P47862). Intracellular, C-terminus.

Dilution

WB ~ 1:200-1:2000

Peptide Confirmation

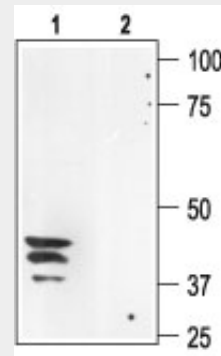
Confirmed by mass-spectrography and amino acid analysis.

Application Details

Immunoprecipitation (IP): - Mouse epidermal keratinocytes (1 µg per ml) (see Zheng, X. and Bollinger Bollag, W. (2003) in Product Citations). Indirect flow cytometry (IFC): - Human airway epithelial cell (see Avril-Delplanque, A. et al. (2005) in Product Citations).

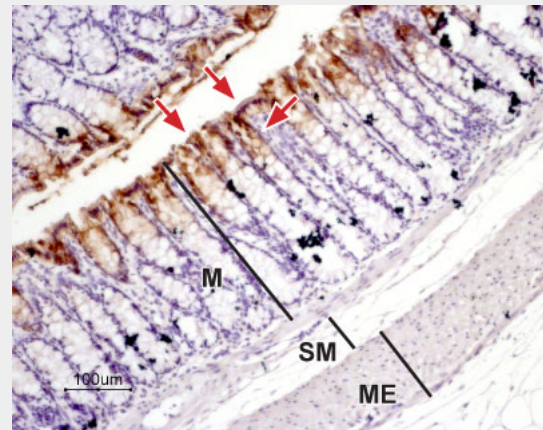
Format

Affinity purified antibody, lyophilized powder



Western blot analysis of rat kidney membranes:

1. Anti-Aquaporin 3 antibody (#AG1046), (1:200).
2. Anti-Aquaporin 3 antibody, preincubated with the control peptide antigen.



Expression of Aquaporin 3 in rat colon

Immunohistochemical staining of paraffin embedded longitudinal section of rat colon using **Anti-Aquaporin 3** antibody (#AG1046), (brown). Aquaporin 3 is detected in absorptive cells that are present in the luminal epithelium and in the superior third of the intestinal glands (arrows). Hematoxylin is used as the counterstain. mucosa (M), submucosa (SM) and muscularis externa (ME).

Aquaporin 3 Antibody - Background

Aquaporin 3 (AQP-3) belongs to a family of membrane proteins that allow passage of water and certain other solutes through biological membranes. The family is composed of 13

Reconstitution

50 µl or 0.2 ml deionized water, depending on the sample size.

Antibody Concentration After Reconstitution

0.4 mg/ml.

Storage Before Reconstitution

Lyophilized powder can be stored intact at room temperature for several weeks. For longer periods, it should be stored at -20°C.

Storage After Reconstitution

The reconstituted solution can be stored at 4°C for up to 2 weeks. For longer periods, small aliquots should be stored at -20°C or below. Avoid multiple freezing and thawing. The further dilutions should be made using a carrier protein such as BSA (1%). Centrifuge all antibody preparations before use (10000 × g 5 min).

Control Antigen Storage Before Reconstitution

Lyophilized powder can be stored intact at room temperature for several weeks. For longer periods, it should be stored at -20°C.

Control Antigen Reconstitution

100 µl water.

Control Antigen Storage After Reconstitution

-20°C.

PreadSORption Control

1 µg peptide per 1 µg antibody.

Formulation

Lyophilized powder. Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN₃.

members (AQP-0 to AQP-12).

The aquaporins can be divided into two functional groups based on their permeability characteristics: the aquaporins that are only permeated by water and the aquaglyceroporins that are permeated by water and other small solutes such as glycerol. This last group includes AQP-3 as well as AQP-7, AQP-9 and AQP-10.¹ Little is known about the function of the two newest members, AQP-11 and AQP-12.

The proteins present a conserved structure of six transmembrane domains with intracellular N- and C-termini. The functional channel is a tetramer but each subunit has a separate pore and therefore the functional channel unit, contains four pores.¹

AQP-3 is widely expressed in several organs with prominent expression found in the skin, colon, lung and kidney. Consistent with a central function of AQP-3 in skin, mice deficient in AQP-3 have reduced skin water content and elasticity compared with wild-type mice, as well as impaired wound healing and epidermal biosynthesis.² Furthermore, AQP-3 deficient mice were found to be resistant to skin tumor development suggesting a role for this aquaporin in tumorigenesis.³

Aquaporin 3 Antibody - References

References 1. King, L.S. et al. (2004) Nat. Rev. Mol. Cell Biol. 5, 687. 2. Hara, M. et al. (2003) Proc. Natl. Acad. Sci. U.S.A. 100, 7360. 3. Hara-Chikuma, M. and Verkman, A.S. (2008) Mol. Cell. Biol. 28, 326.

Aquaporin 3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)