ALPHA DIAGNOSTIC INTERNATIONAL

PRODUCT SPECIFICATION SHEET

Aquaporin 10 (AQP10) antibodies

Cat # AQP101-P	Human AQP10 control/blocking peptide	**SIZE**: 100 ug
Cat # AQP101-S	Rabbit Anti-Human AQP10 antiserum	**SIZE**: 100 ul
Cat # AQP101-A	Rabbit Anti-Human AQP10 IgG (**aff pure**)	**SIZE**: 100 ug

Water is a critical component of all living cells. Interestingly, tissue membranes show a great degree of water permeability. Mammalian red cells, renal proximal tubules, and descending thin limb of Henle are extraordinarily permeable to water. Water crosses hydrophobic plasma membranes either by simple diffusion or through a facilitative transport mechanism mediated by special protein "**aquaporin**". A new member of AQP family, **AQP10**, has been cloned (1). **AQP10** (human 264 aa) is most closely related with AQP3 (53%), AQP9 (52%), and AQP7 (43%). It is abundantly expressed in duodenum and jejunum. AQP10 is not permeable to urea and glycerol.

FUNCTION: Forms a water channel. Not permeable to urea and glycerol. May contribute to water transport in the upper portion of small intestine.
SUBCELLULAR LOCATION: Multi-pass membrane protein.
ALTERNATIVE PRODUCTS: 2 named isoforms produced by Isoform I (protein accession # Q96PS8-1, 301 aa) and isoform 2 (264 aa; 236-301 changed)
TISSUE SPECIFICITY: Expressed exclusively in duodenum and jejunum. Highest expression in absorptive epithelial cells at the tips of villi in the jejunum.
DOMAIN: Aquaporins contain two tandem repeats each containing three membrane-spanning domains and a pore-forming loop with the signature motif Asn-Pro-Ala (NPA).
SIMILARITY: Belongs to the MIP/aquaporin (TC 1.A.8) family [view classification].
Protein name Aquaporin-10
Synonyms AQP-10
Small intestine aquaporin
Gene name Name: AQP10

Source of Antigen and Antibodies

Antigen	17-aa peptide of Human AQP10 (**Protein accession** # Q96PS8-2; **ref. 1)** designated as AQP10-P control/blocking peptide conjugated to KLH; epitope location ~ C-terminus
Ab Host/type	Rabbit, Polyclonal antiserum (Cat# AQp101-S) and IgG (Cat # AQP101-A), purified over antigen-Agarose
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage
Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

We recommend the use of 0.5-1% milk in all primary/secondary antibody-enzyme conjugate incubations in order to suppress non-specific bands.

Western Blotting 1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL. see refs 2.

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: we recommend the use of affinity purified IgG at 2-10 ug/ml in paraformaldehyde fixed sections of tissues. see refs 2.

Specificity & Cross-reactivity

Human AQP101-P peptide sequence is only found in isoforms 2 and not isoforms 1 of AQP10. No homology to any other known AQP or other proteins. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity.

General References: 1) Hatakeyama S et al (2001) BBRC 287(4), 814-819.

(2) Citations of ADI's Antibodies (see web site for updated list)

Mobasheri A, 2004, Histochem. Cell Biol. 121 p463, WB, IHC
DaSilva N2005, Biol Reprod, 74: 427 – 438, WB IF

**This product is for In vitro research use only.*

Related material available from ADI
AQP101-S-A-P 70910A

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