ALPHA DIAGNOSTIC INTERNATIONAL

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**Product Specification Sheet**

**Aquaporin Adipose (AQPAP/AQP7-Like) Antibodies**

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|---|---|---|
| **Cat** # AQPAP11-P | Human AQPAP Control/blocking peptide | **SIZE**: 100 ug |
| **Cat** # AQPAP11-S | Rabbit Anti-Human AQPAP antiserum # 1 | **SIZE**: 100 ul |
| **Cat** # AQPAP11-A | Rabbit Anti-Human AQPAP IgG # 1 (**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**". Over the last decade, genes for several members of aquaporin family have been cloned, expressed, and their distribution studied in many tissues.

Most recently, adipose specific **AQP-adipose** (342 aa; **AQPAP** or AQP7-like) has been cloned. It facilities water and glycerol transport. AQP families of proteins are predicted to contain six transmembrane domains. The N and C-terminus are predicted to be cytoplasmic.

FUNCTION: Forms a channel for water and glycerol.
SUBCELLULAR LOCATION:; Multi-pass membrane protein.
DOMAIN: Aquaporins contain two tandem repeats each containing three membrane-spanning domains and a pore-forming loop with the signature motif Asn-Pro/Ala-Ala/Ser (NPA).
SIMILARITY: Belongs to the MIP/aquaporin (TC 1.A.8) family Protein name Aquaporin-7
Synonyms AQP-7, Aquaporin-7-like, Aquaporin adipose, AQPap AQP7L, AQP9; Gene name Name: AQP7

## Source of Antigen and Antibodies

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|---|---|
| **Antigen** | 20-aa peptide of Human AQPAP (protein accession #O14520, refs 1) ; **Designated (AQPAP11-P control or blocking peptide**) conjugated to KLH; **Epitope location**~ N-terminus, Cytoplasmic domain |
| **Ab Host/type** | Rabbit, Polyclonal unpurified antiserum (#**AQPAP11**-S) and IgG, purified over antigen-agarose (Cat # **AQPAP11**-A) Antibodies to the same peptide were also generated in Chicken (#AQPAP12-S) |
| **2-Ab** | Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available). |
| **-ve control IgG** | # 20009-1, Rabbit (non-immune) 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

**Western Blotting** (1:1K-5K for neat serum and 1-10 µg/ml for affinity pure using Chemiluminescence technique). See published papers below.

**ELISA** (1:100K; using 50-100 ng control peptide/well).

**Histochemistry** & Immunofluorescence: we recommend the use of affinity purified antibody at 2-10 µg/ml (2). Adherent cells can be fixed in 50% methanol-50% acetone or 1% paraformaldehyde (3). See published papers below.

## Specificity & Cross-reactivity

The 20 AA hAQPAP peptide is 100% conserved in chimp and monkey AQPAP. Antibody cross-reactivity in various species is not known. 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) Kuriyama H et al (1997) BBRC 241, 53-58.

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

## Related material available from ADI

Antibodies for AQP1, AQP2, AQP3, AQP4, AQP5, AQP6, AQP7, AQP8, AQP9, AQP-AP, & rUT2)

Western blot Recycling kit (probe same blot with multiple antibodies)

AQPAP11-S-A-P 70910A

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