ALPHA DIAGNOSTIC INTERNATIONAL

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PRODUCT SPECIFICATION SHEET

Aquaporin 6 (WCH3 or hKID or AQP2-L)

Cat # AQP62-P	**Human** AQP6 Control/blocking peptide # 1	**SIZE**: 100 ug
Cat # AQP62-S	**Chicken** Anti-Human AQP6 antiserum # 1	**SIZE**: 100 ul
Cat # AQP62-A	**Chicken** Anti-Human AQP6 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.

AQP6 (WCH3 or hKID or AQP2-like; 282 aa; 29 kDa; chromosome 12q13; rat 276 aa) is found only in the kidney with low water permeability. Human AQP6 is alternatively spliced to isoform 2, a 163 aa protein that contains 2 extra internal regions, which leads to translations shift and an early termination, as compared to the 282-aa isoform 1. the isoform 2 contains an identical N-terminal 134-aa and a distinct 29-aa C-terminus. Human AQP6 AQP families of proteins are predicted to contain six transmembrane domains. The N and C-terminus are predicted to be cytoplasmic. AQP6 shows greatest homology with hMIP (48%) and hAQP-2 (52%). It also has similarity with human MIWC (AQP4; 34%), CHIP-28 (AQP1; 38%), and GLIP (AQP3; 22%).

Source of Antigen and Antibodies

Antigen	19aa peptide of Human AQP6 (Gene Accession # Q13520 ; **Designated (AQP62-P or control peptide) conjugated to KLH;** ~ C-terminal, Cytoplasmic domain
Ab Host/type	Chicken, polyclonal, Unpurified antiserum (cat # AQP62-S) Aff pure IgG1 (**cat #AQP62-A**) purified over antigen-agarose column
2-ab	**Goat Anti-chicken IgG-HRP** cat # 60320 (AP, biotin, FITC conjugates also available)
-ve control	**Cat # 20010-1, Chicken (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 antiserum and 1-10 ug/ml for affinity pure antibody using Chemiluminescence technique.

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: not tested. we recommend the use of affinity purified antibody at 2-10 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity of antigen & potential cross-reactivity

The 19 AA hAQP62 peptide is 47% conserved in rat AQP6. The AQP62 epitope is not found in human AQP6 isoform 2. It has no significant homology to AQP2 or any other AQPs. 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 (see detailed protocol at: www.4adi.com\data\abblock.html).

General References : (1) Ma T (1996) Genomics 35, 543-550; Ma T (1997) genomics 43, 387; Yasui M (1999) PNAS 96, 5808.

Citations of ADI's antibodies for AQP6 (see updated list at the web site)

Jeremic A, 2005, Exp. Biol. Med. 230: 674 - 680 WB IF
Wang W 2003 Calcified T Intl. 72(3):222-7 WB

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

AQP62-S-A-P 72407A

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