

Product Specification Sheet

**Aquaporin 1-6 antibodies and control peptides**

<b>Cat # AQP16-PAN-P</b>	AQP1-6 control peptides	<b>SIZE:</b> 25 ug x 6 vials
<b>Cat # AQP16-PAN-S</b>	Rabbit Anti-AQP1-6 antiserum # 1	<b>SIZE:</b> 25 ul x 6 vials
<b>Cat # AQP16-PAN-A</b>	Rabbit Anti-AQP1-6 IgG # 1 (aff pure)	<b>SIZE:</b> 25 ug x 6 vials

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 "aquaporins". Over the last decade, genes for several members of aquaporin family have been cloned, expressed, and their distribution studied in many tissues. **AQP0** or **MIP26** (major intrinsic protein 26 kDa), and Aquaporin-1 (**AQP1**, purified from red cells) also called **CHIP-28** (channel forming integral protein, 28 kDa; 268 AA; gene locus 7p14) has been the foundation of the growing family of aquaporin. The lens specific **AQP0** represents up to 80% of total lens membrane protein. **AQP2** (AQP-CD or WCH-CD; 265 AA; gene locus 12q13) is the vasopressin-regulated water channel of the apical membrane of collecting duct cells. **AQP3** (GLIP, Glycerol-transporting integral protein; 285 AA) has a wide tissue distribution. **AQP4** (MIWC, mercury-insensitive water channel; 301 AA; gene locus 18q22) is expressed in brain and in other tissues as well. **AQP5** (282 AA) is found in several epithelial tissues (salivary and lachrymal glands, etc). **AQP6** (WCH3 or hKID or AQP2-like; 282 aa; chromosome 12q13) is only found in kidney with low water permeability. **AQP7** (rAQP7, 269aa) is abundantly expressed in testis. It is involved in water, glycerol and urea transport. **AQP7** is also found in adipose tissue, kidney, and heart. **AQP8** (263aa) is also abundant in testis. It is also found in liver, pancreas, placenta and salivary gland. **AQP9** (295aa) is primarily expressed in peripheral leukocytes. It is permeable to water and urea. **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. Most recently, adipose specific **AQP-adipose** (342aa; **AQPAP** or **AQP7-like**) has been cloned. It facilitates water and glycerol transport. The individual members of aquaporin family have identical predicted secondary structures with up to 6 highly conserved hydrophobic membrane spanning domains (about 18-25 AA each) and two conserved NPA motifs. However, N/C-terminal regions of AQPs are only ~ 20% conserved.

**AQP1-6 control peptides** of the following individual items (1 vial each)

Cat # AQP11-P, 25 ug	Cat # AQP21-P, 25 ug
Cat # AQP31-P, 25 ug	Cat # AQP41-P, 25 ug
Cat # AQP51-P, 25 ug	Cat # AQP61-P, 25 ug

**Concn:** 25 ug/25 ul PBS

**Form:** solution lyophilized powder

Dissolve powder in 100 ul PBS to preplate 25 ug/100 ul or (0.25 mg/ml stock).

**AQP1-6 Antiserum (unpurified, undiluted)** of the following individual items (1 vial each)

Cat # AQP11-S, 25 ul	Cat # AQP21-S, 25 ul
Cat # AQP31-S, 25 ul	Cat # AQP41-S, 25 ul
Cat # AQP51-S, 25 ul	Cat # AQP61-S, 25 ul

**Buffer:** Antiserum in 0.05% azide

**Form:** solution lyophilized powder

Dissolve powder in 100 ul PBS to preplate 1:4 diluted stock. For a working dilution of 1:1000 use 4 ul/ml as the stock is already diluted 1:4. Adjust stock concn accordingly if other working dilutions are prepared.

**AQP1-6 Aff pure IgGs** of the following individual items (1 vial each)

Cat # AQP11-A, 25 ug	Cat # AQP21-A, 25 ug
Cat # AQP31-A, 25 ug	Cat # AQP41-A, 25 ug
Cat # AQP51-A, 25 ug	Cat # AQP61-A, 25 ug

**Buffer:** PBS or Tris buffer, pH 7.5, 0.2% BSA

**Form:** solution lyophilized powder

Dissolve powder in 100 ul PBS to preplate 1:4 diluted stock. For a working dilution of 1:1000 use 4 ug/ml as the stock is already diluted 1:4. Adjust stock concn accordingly if other working dilutions are prepared.

**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

For Antibody usage, antigenic peptides, and other specific information relating to each item, please consult individual data sheets.

\*This product is for in vitro research use only.

AQP16-PAN-S –A-P 70910A

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