ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

Aquaporin 0-9 and AQPAP antibodies and control peptides

Cat # AQP0-9-AP-P	AQP1-9 and AQPAP control peptides	**SIZE**: 25 ug x 10 vials
Cat # AQP0-9-AP-S	Rabbit Anti-AQP1-9 and AQPAP antiserum # 1	**SIZE**: 25 ul x 10 vials
Cat # AQP0-9-AP-A	Rabbit Anti-AQP1-9 and AQPAP IgG # 1 (**aff pure**)	**SIZE**: 25 ug x 10 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 facilities 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.

AQP0-9 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
Cat # AQP71-P, 25 ug	Cat # AQP81-P, 25 ug
Cat # AQP91-P, 25 ug	Cat # AQPAP11-P, 25 ug

Concn: 25 ug/25 ul PBS and 0.05% azide
Form: solution lyophilized powder

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

AQP0-9 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
Cat # AQP71-S, 25 ul	Cat # AQP81-S, 25 ul
Cat # AQP91-S, 25 ul	Cat # AQPAP11-S, 25 ul

Buffer: Antiserum in 0.05% azide
Form: solution lyophilized powder

Dissolve powder in 100 ul PBS to prepate 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 dilutiosn are prepared.

AQP0-9 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
Cat # AQP71-A, 25 ug	Cat # AQP81-A, 25 ug
Cat # AQP91-A, 25 ug	Cat # AQPAP11-A, 25 ug

Buffer: PBS or pH 7.5, 0.2% BSA
Form: solution lyophilized powder

Dissolve powder in 100 ul PBS to prepate 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 dilutiosn are prepared.

Storage

Short-term: unopened, undiluted liquid vials for less than a week at 4oC. Powder can be stored at 4oC or –20oC for short term or long-term.

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.

AQP0-9-AP-S 70910A

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