

Data Supplements

Supplemental Fig. S1. Phylogenetic analysis of aquaporins. Sequence alignment in Phylip format was performed using the online program ClustalW (EBI, <http://www.ebi.ac.uk/clustalw/>) with default gap parameters. Aligned sequences were then imported into the program SplitsTree4 (www.splitstree.org), and the BioNJ algorithm was used to construct the phylogenetic tree. GenBank accession numbers of sequences used for phylogenetic analysis are given in parentheses: human (*homo sapiens*) AQP0 (NM_012064), human AQP1 (NP_932766), human AQP2 (NP_000477), human AQP3 (NP_004916), human AQP4 (NP_001641), human AQP5 (NP_001642), human AQP6 (NP_001643), human AQP7 (NP_001161), human AQP8 (NP_001160), human AQP9 (NP_066190), human AQP10 (CAH70483), human AQP11 (AB028147), and human AQP12 (AB040748); zebrafish (*Danio rerio*), AQP3 (BC044188) and AQP8 (BC081511); European eel (*Anguilla anguilla*) AQP1 (AJ564420) and AQP1dup (AJ564421); Japanese eel (*Anguilla japonica*) and AQP1 (AB094501); seam bream (*Sparus aurata*) AQP3 (AY363261); Mozambique tilapia (*Oreochromis mossambicus*) AQP3 (AB126941); killifish (*Fundulus heteroclitus*) AQP0 (AF191906).

Supplemental Fig. S2 The blot was probed with anti-European eel Aqp1. The polyclonal antibody recognized a band at molecular weight (MW) of ~27 kDa (close to the predicted WM of zebrafish Aqp1a, i.e., 27.4 kDa) in brain, eye, gill, swim bladder, and zebrafish aqp1a-injected oocytes. In addition, an additional band close to 100 kDa was recognized in brain and skeletal muscle, and a third band of ~150 kDa was recognized in skeletal muscle, which is almost invisible in a shorter exposure shown in Supplemental Fig. 2.

Supplemental Fig. S3 The membrane was probed with anti-European eel Aqp1 antibody and anti-actin monoclonal antibody. The full blot is the same as that contributed to the blots of zebrafish Aqp1a and actin in Fig. 4 in the main text. The additional band (indicated by arrow) in gill could arise from anti-actin since it does not appear in the blot in Supplemental Fig. 2 when only Aqp1a is probed by the same antibody.