

Figure S7. Comparison of protein structural features, evolution pressure, and exon-intron structures of full-length *Oeu*AQP and *Oleur*AQP genes from the wild *Olea europaea* var. *sylvestris* and the cultivated *Olea europaea* cv. Picual, respectively.

OeuAQPs OleurAQPs	Oeu- & OleurAQP ar/R / Froger's / NPA1-2 Motifs*	Oeu- & OleurAQP SDP motifs**	Oeu/Oleur AQP Protein similarity (Ka/Ks)	OleurAQP similarities CDS - Protein***	Ka/Ks OleurAQP duplicates***	Oeu- & OleurAQP Exon Intron genomic structures (Exon, red boxes; Intron, black line; Gene orientations indicated (3') in the x-axis)
						0kb1kb2kb3kb3'
Plasma membrane intrinsic proteins (PIPs)						
OeuPIP1;1a/b/c OleurPIP1;1	F-H-T-R / G-S-A-F-W / NPA-NPA	Bo CO2 H2O2 Ur	100% (0,0010)	-	-	
OeuPIP1;2 OleurPIP1;2a OleurPIP1;2b	F-H-T-R / G-S-A-F-W / NPA-NPA	Bo CO2: H2O2 Ur	100% (0,0010) 100% (0,0010)	99,42% - 100%	0,001	
OeuPIP1;3 OleurPIP1;3a OleurPIP1;3b	F-H-T-R / M-S-A-F-W / NPA-NPA M-S-A-F	Bo CO2: H2O2 Ur	96,52% (0,5323) 97,329% (0,3028)	94,76% - 93,49%	0,4137	
OeuPIP1;4 OleurPIP1;4a OleurPIP1;4b	F-H-T-R / G-S-A-F-W / NPA-NPA	Bo CO2: H2O2 Ur	99,65% (0,0961) 99,3% (0,1237)	98,65% - 99,65%	0,0534	
OeuPIP1;5 OleurPIP1;5a OleurPIP1;5b	F-H-T-R / G-S-A-F-W / NPA-NPA	Bo CO2: H2O2 Ur	100% (0,3641) 94,8% (0,1383)	93,70% - 94,80%	0,1784	
OeuPIP1;6a OleurPIP1;6a OleurPIP1;6b	F-H-T-R / G-S-A-F-W / NPA-NPA	Bo CO2: H2O2 Ur	100% (0,6987) 99,65% (0,6987)	99,53% - 99,65%	0,091	
OeuPIP2;1 OleurPIP2;1a OleurPIP2;1b	F-H-T-R / Q-S-A-F-W / NPA-NPA	H2O2 Ur	99,65% (0,3717) 99,65% (0,3717)	99,31% - 100%	0,001	
OeuPIP2;2 OleurPIP2;2a OleurPIP2;2b	F-H-T-R / Q-S-A-F-W / NPA-NPA Ur Ur	Ur	99,64% (0,0010) 99,64% (0,0010)	99,98% - 100%	0,001	
OeuPIP2;3 OleurPIP2;3a OleurPIP2;3b	F-H-T-R / Q-S-A-F-W / NPA-NPA	H2O2 Ur	100% (0,1361) 98,96% (0,1780)	98,65% - 99,96%	0,178	
OeuPIP2;4 OleurPIP2;4	F-H-T-R / Q-S-A-F-W / NPA-NPA	H2O2 Ur	99,26% (0,5108)	-	-	
OeuPIP2;5 OleurPIP2;5	F-H-T-R / Q-S-A-F-W / NPA-NPA	H2O2 Ur	100% (0,0010)	-	-	
OeuPIP2;6 OleurPIP2;6a OleurPIP2;6b	F-H-T-R / Q-S-A-F-W / NPA-NPA -H-T-R / Q-S-A-F-W / NPA-NPA -H-T-R / Q-S-A-F-W / NPA-NPA	H2O2 Ur	99,31% (0,1710) 99,65% (0,1468)	99,19% - 99,65%	0,0666	
OeuPIP2;7 OleurPIP2;7	F-H-T-R / Q-S-A-F-W / NPA-NPA	H2O2 Ur	99,65% (0,1799)	-	-	
OeuPIP2;8 OleurPIP2;8a OleurPIP2;8b	F-H-T-R / M-S-A-F-W / NPA-NPA	H2O2 Ur	100% (0,0010) 99,29% (0,1073)	99,30% - 99,29%	0,1703	
OeuPIP2;9 OleurPIP2;9a OleurPIP2;9b	F-H-T-R / M-S-A-F-W / NPA-NPA	H2O2 Ur	100% (0,0010) 99,65% (0,1388)	99,53% - 99,65%	0,1388	
OeuPIP2;10 OleurPIP2;10	F-H-T-R / Q-S-A-F-W / NPA-NPA	H2O2 Ur	98,85% (1,2672)	-	-	
OeuPIP2;11 OleurPIP2;11	F-H-T-R / Q-S-A-F-W / NPA-NPA	H2O2 Ur	-	-	-	
OeuPIP2;12 OleurPIP2;12	F-H-T-R / M-S-A-F-W / NPA-NPA	H2O2 Ur	-	-	-	
Tonoplast intrinsic proteins (TIPs)						
OeuTIP1;1 OleurTIP1;1	H-I-A-V / T-S-A-Y-W / NPA-NPA	Ur	100% (0,4860)	-	-	
OeuTIP1;2 OleurTIP1;2a OleurTIP1;2b	H-I-A-V / T-S-A-Y-W / NPA-NPA	Ur	100% (0,0010) 99,6% (0,0520)	98,42% - 99,60%	0,0427	
OeuTIP1;3 OleurTIP1;3a OleurTIP1;3b OleurTIP1;3c OleurTIP1;3d OleurTIP1;3e	H-I-A-V / T-S-A-Y-W / NPA-NPA	Ur	99,22% (0,1299) 99,22% (0,1147) 98,84% (0,1656) 91,47% (0,1220) 92,25% (0,1142)	99,87% - 99,22%* 99,74% - 99,61%* 88,93% - 92,28%* 89,48% - 93,02%*	0,0010* 0,4009* 0,1083* 0,1004*	
OeuTIP1;4 OleurTIP1;4	H-I-A-V / T-S-A-F-W / NPA-NPA	Ur	99,21% (0,1000)	-	-	
OeuTIP1;5 OleurTIP1;5	H-I-A-V / T-S-A-F-W / NPA-NPA	Ur	92,95% (1,2712)	-	-	
OeuTIP1;6 OleurTIP1;6	H-I-A-V / T-S-A-Y-W / NPA-NPA	Ur	92,95% (1,2712)	-	-	
OeuTIP1;7 OleurTIP1;7	H-I-G-R / T-S-A-Y-W / NPA-NPA	H2O2 Ur	97,61% (1,5809)	-	-	
OeuTIP2;1 OleurTIP2;1	H-I-G-R / T-S-A-Y-W / NPA-NPA	H2O2 Ur	100% (0,3550)	-	-	
OeuTIP2;2 OleurTIP2;2	H-I-G-R / T-S-A-Y-W / NPA-NPA	H2O2 Ur	-	-	-	
OeuTIP2;3 OleurTIP2;3a OleurTIP2;3b	H-I-G-R / T-S-A-Y-W / NPA-NPA	Ur	100% (0,0010) 100% (0,0010)	99,97% - 100%	0,001	
OeuTIP2;4 OleurTIP2;4	H-I-G-R / T-S-A-Y-W / NPA-NPA	Ur	99,2% (0,1298)	-	-	
OeuTIP2;5 OleurTIP2;5a OleurTIP2;5b	H-I-G-R / T-S-A-Y-W / NPA-NPA	Ur	100% (0,0010) 99,59% (0,1018)	99,05% - 99,59%	0,0538	
OeuTIP3;1 OleurTIP3;1a OleurTIP3;1b OleurTIP3;1c	H-V-A-R / T-A-A-Y-W / NPA-NPA	Ur	100% (0,0010) 98,84% (0,1019) 98,84% (0,1433)	97,81% - 98,84%* 86,77% - 89,84%*	0,1019* 0,1433*	
OeuTIP4;1 OleurTIP4;1	H-V-A-R / T-S-A-Y-W / NPA-NPA	Ur	100% (0,0010)	-	-	
OeuTIP5;1 OleurTIP5;1	N-V-G-Y / T-S-A-Y-W / NPA-NPA	Ur	99,68% (0,3778)	-	-	
OeuTIP5;2 OleurTIP5;2	N-V-G-Y / T-S-A-Y-W / NPA-NPA -S-A-Y-W / NPA-NPA -S-A-Y-W / NPS	Ur	96,76% (0,3255)	-	-	
OeuTIP5;3 OleurTIP5;3a OleurTIP5;3b	N-V-G-Y / T-A-A-Y-W / NPA-NPA	H2O2 Ur	100% (0,4970) 99,6% (0,1041)	99,34% - 99,60%	0,1041	
Uncharacterized X intrinsic proteins (XIPs)						
OeuXIP1;1 OleurXIP1;1a OleurXIP1;1b	I-L-A-R / V-C-A-F-W / NPV-NPA	H2O2	100% (0,0010) 99,41% (0,1263)	99,61% - 99,41%	0,2411	
OeuXIP1;2 OleurXIP1;2a OleurXIP1;2b	A-L-A-R / V-C-P-F-W / NPV-NPA	H2O2 Ur	100% (0,1199) 99,79% (0,1973)	99,73% - 99,79%	0,325	
OeuXIP1;3 OleurXIP1;3	A-L-A-R / V-C-A-F-W / NPV-NPA	H2O2 Ur	94,01% (1,1671)	-	-	
Nodulin-26 like intrinsic proteins (NIPs)						
OeuNIP1;1 OleurNIP1;1	W-V-A-R / F-S-A-Y-I / NPA-NPA	H2O2 Ur	99,61% (0,2954)	-	-	
OeuNIP1;2 OleurNIP1;2	C-I-A-R / F-S-A-Y-I / NPA-NPA	Ur	100% (0,7996)	-	-	
OeuNIP1;3 OleurNIP1;3	W-V-A-R / F-S-A-Y-I / NPA-NPV	H2O2 Ur	89,76% (0,8785)	-	-	
OeuNIP1;4 OleurNIP1;4	W-V-A-R / F-S-A-Y-I / NPA-NPV	H2O2 Ur	-	-	-	
OeuNIP3;1 OleurNIP3;1	W-I-A-R / F-S-A-Y-V / NPA-NPA	Ur	100% (0,0010)	-	-	
OeuNIP4;1 OleurNIP4;1a OleurNIP4;1b	W-V-A-R / F-S-A-Y-I / NPA-NPA	Ur	99,63% (0,3973) 99,25% (0,1497)	98,67% - 98,88%	0,2184	
OeuNIP5;1 OleurNIP5;1a OleurNIP5;1b	A-I-G-R / F-T-A-Y-L / NPS-NPV	Bo Ur Bo Ur Bo	99,33% (0,4567) 99,33% (0,2268)	99,77% - 100%	0,001	
OeuNIP5;2 OleurNIP5;2	A-I-G-R / F-T-A-Y-L / NPS-NPV F	Bo Ur	96,98% (0,3559)	-	-	
OeuNIP5;3 OleurNIP6;1 OleurNIP6;1	A-I-G-R / F-T-A-Y-L / NPS-NPV T-I-A-R / F-T-A-Y-L / NPS-NPV NPA	Bo Ur Bo	- 90,67% (0,3093)	-	-	
OeuNIP7;1 OleurNIP7;1a OleurNIP7;1b	A-V-G-R / Y-S-A-Y-L / NPA-NPA I I	Ur - -	99,22% (0,2690) 99,43% (1,3207)	99,52% - 92,11%	1,156	
Small basic intrinsic proteins (SIPs)						
OeuSIP1;1 OleurSIP1;1a OleurSIP1;1b OleurSIP1;3	V-T-P-N / F-A-A-Y-W / NPT-NPA -A-A-Y-W	-	100% (0,0010) 100% (0,0010)	100% - 100%	0,001	
OeuSIP1;2 OleurSIP1;2	V-T-P-N / F-A-A-Y-W / NPT-NPA	-	100% (0,3476)	-	-	
OeuSIP2;1 OleurSIP2;1 OleurSIP2;2	S-K-G-S / I-V-A-Y-W / NPL-NPA - -	-	100% (0,2534)	-	-	

* Residue differences are in red
 ** Bo, Boric acid; Ur, Urea
 *** Similarities calculated with OleurAQPs paralogue