

**Figure S3.** Deduced protein sequences of *Fraex*AQPs from *Fraxinus excelsior*. Sequences are listed according to their subfamilies. Pseudogenes and/or incomplete sequences are listed at the end of the document.

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>FraexTIP1;3 FRAEX38873\_v2\_000314120.1

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FGLFVAVSISANISGGHVNPVAVTFGLFLGGNISLIRGILYIIAQLLGSVACLLLLFTSTGGLETSAFALGADV  
SVWN  
AFVFEIVMTFGLVYTVYATAVDPKKGELGIIAPIAIGFIVGANILAGGAFTGASMPAVSFGPALVSFTWTHHW  
YVAGPLIGGGLAGIVYEVFFISHSHEPLPGSEY

>FraexTIP1;4 FRAEX38873\_v2\_000086560.1

MSSEFFNVPLRRVAFGHRDEFQPGAIIKAAALAEFISTLIFVFAGQSGMAYNKLTDGNAPSSPSGLVAAVAHGF  
GLFVAVSTANISGGHVNPVAVTFGLFLGGNISLFRGVLYIIAQLLGSVACLLLLFTTGGLETSAFALSAGV  
SVWN  
AFVFEIVMTFGLVYTVYATAVDPKKGEVGIIAPLAIGLIVGANILAGGAFTGASMPAVSFGPALVSFNWTHHW  
YVAGPVIGGGLAGIVYEVFFISHSHEPLPSSEY

>FraexTIP1;6 FRAEX38873\_v2\_000091910.1

MPIYQIAIGTPGEASHPDALKAAALAEFFSMLIFVFAGQSGMAFNKLSNDGSSTPSGLLAAALAHAFALFVAVSV  
SANISGGHVNPVAVTFGAFIGGNITLLRGILYWLAQLLGSVACMLLKLFATGGLEISAFALSSGVSVWNAV  
FVFEIV  
MTFGLVYTVYATAVDPKKGLDLSIAPIAIGFIVGANILAGGAFDGAASMPAVSFGPALVSWNFTHHWYVWG  
PLIG  
GATIAALVYDNIYINGEITHEQLPVTDY

>FraexTIP2;1 FRAEX38873\_v2\_000292820.1

MPAIAFGRFHDSSFSIGSLKAYVAEFISTLLFVFAGVGSAAIYNKLTADAALDPAGLVAVAICHGFALFVAVS  
SIGA  
NISGGHVNPVAVTFGLALGGQITLLTGLFYWIAQLLGSIVACYLLVFTGGLAIPTHGVGAGVGAIEGVMEIV  
T  
FALVYTVYATAADPKKGLGTIAPIAIGFIVGANILAAGPFGSGSMNPARSFGPAVASGNFSGIWIYVWG  
PLIG  
GLAGLIYANVFMVSHETPLATDF

>FraexTIP2;2 FRAEX38873\_v2\_000028480.1

MQAIAFGRFDDSCRLGSLKAYLAEFISTLLFVFAGVGSAAIYNKLTSDAALDPAGLVAVAVCHGFALFVAVSV  
GVA  
NISGGHVNPVAVTFGLAVGGQITVLTGLFYWIAQLLGSIVACFLKVVTTGGLAIPTHGVAAGVGAIEGVMEIV  
T  
FALVYTVYATAADPKKGLGTIAPIAIGFIVGANILAAGPFGSGSMNPARSFGPAVASGDFAGNWIYVWG  
PLIG  
GLAGLVYANVFMVHEYTPLVDEF

>FraexTIP2;3 FRAEX38873\_v2\_000217250.1

MPTIAFGRINDSISVGSCLKAYLAEFISTLLFVFAGVGSIAIYNKLTSDAALDPAGLVAVAVCHGFALFVAVSVGA  
NISGGHVNPVAVTFGLAVGGQITILTGLFYWIAQLLGSIVACLLLKFTVTGGLAIPIHGVAAGVGAIEGVVMEIVIT  
FALVYTVYATAVDPKKGSLGTIAPIAIGFIVGANILAAGPFSGGSMNPARSFPGPAVASGDFAGNWIYVWGPLIGG  
GLAGLVYANVFMVHEHTPLVSEF  
**>FraexTIP2;4 FRAEX38873\_v2\_000269930.1**  
MVRINLGSIGDSFSVPSLKYIAEFIAITLLFVFAGVGSIAIYNKLTSDAALDPGLVAVAVAHAFALFVGVSMMA  
KASGGHLNPAVTFGLAIGGNITITGLFYWIAQLLGSIVACLLLKFTVTNGLAIPHTGVASGMNAVEGVVMEIIT  
FALVYTVYATAADPKNGPLGTIAPIAIGFIVGANILAAGPFSGGSMNPARSFPGPAVVAVDFSQNWYIYVWGPLIGG  
GLAGLVYGDVFIGSYAPLPVQEEYP  
**>FraexTIP3;1 FRAEX38873\_v2\_000352370.1**  
EEATHPDSARATLAEFLSTLVFVFAGEGSLALDKMYKDTALGASSLVVIALAHALSIFAAVASSMNVSGGHVNP  
AVTFGALVGGRVSVLRAIYYWIAQLLGSVLAAILLRLATDGLRPRGFSVADGVGEWNALLMEIVLTFGLVYTVYA  
TAIDPKRGSGLGTIAPLAIAFIVGANVLVGGPFSGASMNPARAFGPALVGWRWRNHVYWLGPFFVGAALAGVIYEF  
GMIQAETPHHSHHLHQPLTPEDY  
**>FraexTIP3;2 FRAEX38873\_v2\_000383670.1**  
MPRGYTFGRAEEATHPDSARATLAEFLSTFVFVFAGEGSILALDKMYRETALGASSLLVIALAHALALFAAVASS  
MNVSGGHVNPVAVTFGALVGGRVSVLRAVFWIAQILGAIVASLLWLATDGLKPQGYSAAGVGEWNALVMEIVL  
TFGLVYTVYSTAIDPKRGSGLGTIAPLAIAFIVGANVLVGGPFSGASMNPARAFGPALVGGWRWRDHVYWLGPPLG  
AALAGVIYEFGMIIQTETPHHTHHQPLAPEDY  
**>FraexTIP4;1 FRAEX38873\_v2\_000264810.1**  
MAKIALGNTREAFQSDCIQALIVEFICTFLFVFAGVGAAMATDKLNGDPLVGLFFVAMAHALVVAVMISAGFRIS  
GGHLNPAVTLGLLAGGHITVVRISILYIDQLLASTAACALLKYLTGGLTVPVHTLATGVDFIQGVIMEIVLTFSL  
LFTVYTTIVDPKKGFLEGMGPLLTLGLVVGANVMAGGPFSGASMNPARSFPGPALVSGDWDHVVYVWGPLIGGGLA  
GYIYENFFIVRSHVPLSREVVF  
**>FraexTIP5;1 FRAEX38873\_v2\_000139560.1**  
MASLKSRLHTVTPTALRSYLAEFISTFFFVFASVGATMSTLKMMPDAASDSSSLVAIAVANAFALSVAVYIAAN  
ISGGHVNPVAVTFGMAIGGHISIPMAIFYWISQTLGSVMACVLLRVTTVVGQRPVTHSIPQEMTGFGAAILEGVMTF  
TLVYTVYAAADPRRGSISVIGPLAIGLVSGANVLASGPFTGGSMNPSYSFSGSALVRGSFKNQAVYVWIGPLIGAAI  
AGILYEHVVFPAQPEPDSLRLGIARGVEV  
**>FraexTIP5;2 FRAEX38873\_v2\_000166170.2**  
MPEFEVGTGPMSAPATPGTPTPLMSSLRIDSLSYDRKSMRCKCLPVDAPTGWGAPHTCSLTNFSVPDISLTRKLG  
AEFVGTFILIFGATAGPIVNQKYNQAETLIGNAACAGLAVMIVILSTGHISGAHLNPSLTIAFATLRHFPWAHVP  
AYIAAQVSASICASFALKGVFHPFMSGGVTVPVSTGQAFALFLITFNLLFVVTAATDTRAVSYQLNTNIIFF  
FLFFKYKVINPCLQVGELAGIAGVATVMLNILVAGPSSGGSMNPVRTLGPAVAAGNYKAVVYLVAPTLGALAG  
AGIYTLVKLNGEEEEAPRQVRSFRR

# Pseudogene/incomplete *OleuraQP* sequences

**>FraexPIP2-related FRAEX38873\_v2\_000337260.1**  
MVHLATIPITGTSINPARSLGPAVIYNQKKAQDDQWIFWVGPFIGAAMAFYHQILRAKAFGSYSSSHV\*  
**>FraexPIP2-related FRAEX38873\_v2\_000295860.1**  
VLAPLPIGFAVFMVHLATIPITGTGINPARSLGAIVIYNQEKAWDDQWIFWVGPFIGAIIAFYHQFILRAGAVK  
ALGSFRSSSHV\*  
**>FraexPIP2-related FRAEX38873\_v2\_000121300.1**  
MAKGVGVVEHGSFTAKDYHDPAPPLIDAEELTKWSFYRAVIAEFIAITLLFLYITVLTIVIGYKSQIDTTAGHGDD  
QCGVGILGIAWAFGGMIFVLVYCTAGISGEFCLYAHINAYKYGLITIRK\*  
**>FraexNIP5-related FRAEX38873\_v2\_000192600.1**  
MAEFEPGTPTPTPTPLMPSLRVDSLSYDRKSMRCKCLPLNVSTWAAPHTCLTHLSAPEISLTRK