

Table S1. PPO members in olive and their physicochemical properties

Database and accession numbers		Name	Protein size (aa)	Tyrosinase domain		PPO1_DWL domain		PPO1_KFDV domain		MW (KDa)	pI	TMHs
				pfam Accssion	Position (aa)	pfam Accssion	Position (aa)	pfam Accssion	Position (aa)			
Olive genome database	EVM0041467	<i>OePPO-1</i>	581	pfam00264	166-375	pfam12142	384-434	pfam12143	457-573	65.03	6.15	0
	EVM0050366	<i>OePPO-2</i>	581	pfam00264	166-375	pfam12142	384-434	pfam12143	457-573	65.03	6.15	0
	EVM0028836	<i>OePPO-3</i>	582	pfam00264	167-376	pfam12142	385-435	pfam12143	458-574	65.16	7.6	0
	EVM0049750	<i>OePPO-4</i>	582	pfam00264	160-372	pfam12142	379-429	pfam12143	455-571	65.96	5.37	0
	EVM0025110	<i>OePPO-5</i>	573	pfam00264	157-365	pfam12142	372-422	pfam12143	445-570	64.4	6.61	0
	EVM0038700	<i>OePPO-6</i>	561	pfam00264	148-355	pfam12142	363-413	pfam12143	434-559	63.86	7.29	0
	EVM0020212	<i>OePPO-7</i>	597	pfam00264	186-392	pfam12142	399-447	pfam12143	471-588	66.94	7.23	0
	EVM0039718	<i>OePPO-8</i>	557	pfam00264	182-391	pfam12142	397-448	cl15965	476-552	62.88	7.26	0
	EVM0034699	<i>OePPO-9</i>	567	pfam00264	152-356	pfam12142	369-418	pfam12143	441-546	64.31	6.04	0
	EVM0023965	<i>OePPO-10</i>	584	pfam00264	174-387	pfam12142	392-443	pfam12143	463-582	66.12	6.04	0
	EVM0008012	<i>OePPO-11</i>	568	pfam00264	157-370	pfam12142	375-426	pfam12143	446-566	63.96	6.6	0
	EVM0018385	<i>OePPO-12</i>	568	pfam00264	157-370	pfam12142	375-426	pfam12143	446-566	63.8	6.47	0
	EVM0021447	<i>OePPO-13</i>	575	pfam00264	164-377	pfam12142	382-433	pfam12143	453-573	64.81	6.22	0
	EVM0052187	<i>OePPO-14</i>	528	pfam00264	165-348	pfam12142	353-396	pfam12143	407-526	59.15	6.11	0
	EVM0005988	<i>OePPO-15</i>	326	cl02830	157-320	-	-	-	-	36.36	8.62	0
	EVM0054558	<i>OePPO-16</i>	365	cl02830	8-167	pfam12142	172-223	pfam12143	243-363	41.6	5.23	0
	EVM0022924	<i>OePPO-17</i>	306	pfam00264	52-225	pfam12142	230-279	-	-	35.84	6.29	0
	EVM0008425	<i>OePPO-18</i>	444	cl02830	141-284	cl13563	286-322	cl15965	346-435	49.34	7.11	0

Table S2. GenBank accession of Plant PPOs

Species	GenBank accession	Rename	Species	GenBank accession	Rename
<i>Populus trichocarpa</i>	XP_002316852.1	PtPPO-1	<i>Solanum lycopersicum</i>	XP_004232833.3	SiPPO-1
	XP_006370115.2	PtPPO-2		NP_001318059.1	SiPPO-2
	XP_024445363.1	PtPPO-3		XP_004246041.1	SiPPO-3
	XP_006370127.2	PtPPO-4		NP_001318057.1	SiPPO-4
	XP_006370118.1	PtPPO-5		NP_001296326.1	SiPPO-5
	XP_006370120.2	PtPPO-6		NP_001334885.1	SiPPO-6
	XP_024448244.1	PtPPO-7		XP_004246029.3	SiPPO-7
	XP_006370125.2	PtPPO-8		XP_004246037.1	SiPPO-8
	XP_024448245.1	PtPPO-9	<i>Selaginella moellendorffii</i>	XP_024519810.1	SmPPO-1
	XP_024464832.1	PtPPO-10		XP_024540745.1	SmPPO-2
	XP_002316632.1	PtPPO-11		XP_002974314.2	SmPPO-3
	XP_006370128.1	PtPPO-12		XP_024537619.1	SmPPO-4
	XP_002305680.2	PtPPO-13		XP_024541491.1	SmPPO-5
<i>Physcomitrium patens</i>	XP_024403506.1	PpPPO-1		XP_024541385.1	SmPPO-6
	XP_024361473.1	PpPPO-2		XP_024537620.1	SmPPO-7
	XP_024363392.1	PpPPO-3		XP_024531515.1	SmPPO-8
	XP_024384986.1	PpPPO-4		XP_024529963.1	SmPPO-9
	XP_024361667.1	PpPPO-5		XP_002982245.2	SmPPO-10
	XP_024361666.1	PpPPO-6		XP_024541271.1	SmPPO-11
	XP_024361665.1	PpPPO-7	<i>Sorghum bicolor</i>	XP_002446944.1	SbPPO-1
	XP_024396277.1	PpPPO-8		XP_002446945.1	SbPPO-2
	XP_024397287.1	PpPPO-9		XP_002458623.1	SbPPO-3
	XP_024401964.1	PpPPO-10		XP_021311316.1	SbPPO-4
	XP_024358854.1	PpPPO-11		XP_002438681.1	SbPPO-5
	XP_024403288.1	PpPPO-12		XP_002443986.1	SbPPO-6
	XP_024383156.1	PpPPO-13		XP_002443987.1	SbPPO-7
				XP_002445175.1	SbPPO-8

Table S3. GenBank accession numbers of plant PPOs. The tyrosinase domains of the listed plant PPOs were phylogenetically analyzed.

Enzyme	Organism	Accession
AmAS1	<i>Antirrhinum majus</i>	BAB20048.1
CgAUs1	<i>Coreopsis grandiflora</i>	AHN09736.1
Ibco	<i>Ipomoea batatas</i> 'Yushu-303'	AAW78869.1
JrTYR	<i>Juglans regia</i> 'Chandler'	ACN86310.1
LtLH	<i>Larrea tridentata</i>	AAQ67412.1
MdPPO1	<i>Malus domestica</i> 'Golden Delicious'	SJK83184.1
ToPPO-1	<i>Taraxacum officinale</i>	ABX09994.1
ToPPO-2	<i>Taraxacum officinale</i>	CAQ76694.1
ToPPO-3	<i>Taraxacum officinale</i>	CBZ41490.1
ToPPO-4	<i>Taraxacum officinale</i>	CBZ41491.1
ToPPO-5	<i>Taraxacum officinale</i>	CBZ41492.1
ToPPO-6	<i>Taraxacum officinale</i>	CCA94610.1
ToPPO-7	<i>Taraxacum officinale</i>	CCD61123.1
ToPPO-8	<i>Taraxacum officinale</i>	CCD61124.1
ToPPO-9	<i>Taraxacum officinale</i>	CCD61125.1
ToPPO-10	<i>Taraxacum officinale</i>	CCE45701.1
ToPPO-11	<i>Taraxacum officinale</i>	CCD61126.1
VvPPOcs-3	<i>Vitis vinifera</i> 'Cabernet Sauvignon'	ALP46091.1
VvPPOg	<i>Vitis vinifera</i> 'Grenache'	AAB41022.1

Table S4. Motif sequences

Motif ID	MotifSeq	Length
Motif 1	FMQQANVHCA YCBGAYDQVGYNNDLZVHNSWLFFPFHRWLYFFERILG	50
Motif 2	EDMGNFYSA GRDPIFYAHHANVDRMWTIWRB	31
Motif 3	EILVJEGIEVDTTKYVKFBVFINDEDDNA SELDNAEYAGSFAQVPHKHKM	50
Motif 4	KGKBITDPDWLNA YFJFYBENAKLVRVKIQDCLD TT KLGYTYEDVP	46
Motif 5	NLIDDPTFALPFWNWDNPKGMTIPPMFBSS	30
Motif 6	NNLTIMYSZMIRQSKTPTDFFGNPYRAGD	29
Motif 7	AAHTVDSEYIAKYEEAIQRMKNLDPTDPR	29
Motif 8	KTNIRLRJT ELL EJDVEDDDTVLVTJVPRSN	32
Motif 9	PGAGSIERGSHTAVHSWVGT	20
Motif 10	QGKJDRRBVLLGLGGLYGASNLVNN	25
Motif 11	APDAAQVFPVTL DKPIRVIVPRPKKSKSG	29
Motif 12	SPLYDAKRBPBHLPP	15
Motif 13	MASLQASATVTSCIPYSSSFS	21
Motif 14	DVTIGGIKIVF	11
Motif 15	GDALDINCCPP	11

Table S5. FPKM values in six different tissues

[illegible]

Table S5. Continue

[illegible]

Table S6. FPKM values in three different tissues

[illegible]

Table S7. Oligonucleotides used for RT-qPCR.

Name	Sequence (5'-3')
qOePPO-5F	TGACGGGAAGAGTCCTTTGC
qOePPO-5R	AATGGATCGCAGTGTGCGTA
qOePPO-8F	GTTAGGAGGACTGTACGGCG
qOePPO-8R	GTATTTCTCCGGTGGGTGGG
qOePPO-9F	TGACATAAGGCACAACTGCGA
qOePPO-9R	TTCGCTTCCCTGAACTGGTG
qOePPO-10F	TCAACGACGATGCAACGGTA
qOePPO-10R	GAGGCACTGATCTTGGGGAC
qGAPDH2-F	CCTTCCGTGTGCCTACTGTT
qGAPDH2-R	GATGGCTGCCTTGATTTTCAT