

Table S1. CYP74 enzyme family proteins from different plant species used in this study.

Species	Name	Locus	Data source
<i>Citrullus lanatus</i>	CIHPL1	Cla007649	CuGenDB
	CIHPL2	Cla007650	
	CIHPL3	Cla015969	
	CIHPL4	Cla015970	
	CIAOS	Cla022526	
<i>Cucumis sativus</i>	CsAOS	Csa2G360780	CuGenDB
	CsHPL1	Csa7G075590	
	CsHPL2	Csa7G075600	
	CsHPL3	Csa7G041960	
<i>Phaseolus vulgaris</i>	Pv-CYP74A33	Phvul.001G017800.1	Phytozome
	Pv-CYP74B20	Phvul.005G116800.1	
	Pv-CYP74C28	Phvul.003G010700.1	
	Pv-CYP74C30	Phvul.011G049600.1	
	Pv-CYP74C29	Phvul.007G055700.1	
<i>Arabidopsis thaliana</i>	AtAOS	At5g42650	TAIR
	AtHPL	At4g15440	
<i>Medicago truncatula</i>	MtAOS1	Medtr1g021652.1	Phytozome
	MtAOS2	Medtr3g111530.1	
	MtHPL1	Medtr4g068550.1	
	MtHPL2	Medtr1g034320.1	
	MtHPL3	Medtr2g087890.1	
	MtHPL4	Medtr1g034330.1	

Data source: CuGenDB, Cucurbit Genomics Database, <http://cucurbitgenomics.org/>; TAIR, the Arabidopsis Information Resource, <http://www.arabidopsis.org/>; Phytozome, <https://phytozome.jgi.doe.gov>.

Table S2. Primers sequences used in qRT-PCR.

Gene ID	Annotations	Forward primer	Reverse primer
Cla007792	<i>β-actin</i>	CCATGTATGTTGCCATCCAG	GGATAGCATGGGGTAGAGCA
Cla007649	<i>CIHPL1</i>	ATGTTCTCCGTCGTTCCCTT	GTGCTCGGCATGAAATCACC
Cla007650	<i>CIHPL2</i>	ACAGATGCCGCTGATGAAAT	CGAATGGCTGATACCCACAAA
Cla015969	<i>CIHPL3</i>	AGGAGCCGACGACGGAGAAC	GGACCAACCAACGATGACC
Cla022526	<i>CIAOS</i>	GCGTATAGCATCAAGAAAGG G	TTCGACCAGAACAAATAATCCA G

Table S3. Sequences and lengths of motifs among plant CYP74 proteins.

Motif	Conserved amino acid sequences	Width
1	VVYEALRIEPPVPYQYGRARKDLVIESHDAAFEIKKGEMJFGYQPFATKD	50
2	GEKLLKYVLWSNGPETEEPTVSNKQCAGKBLVLLCRLLVVELFLRYDTF	50
3	REEACHNLLFTAGFNAYGGMKIFFPILJKWIGRA	34
4	KPIPGSYGLPFFGPIKDRHDYFYNQGRDKFFRSRIZKYNSTVFRTNMPPG	50
5	ALLDGKSPILFDNSKVEKKBVLDGTFMPSTEFTGGYRVCAYLDPSEPKH	50
6	PKJFNYLEDJLJHTFPLPFALVKSDYRKLIEFF	33
7	DBPSDTKLGSDGPKLVDKWLLFQLAPLAT	29
8	LKSRSDIFIPEFRSNLSEFBKJEKELAK	29
9	GENLHKKLAEEIRTVVKEEGG	21
10	IFDEAEFVDPDRFVG	15