SUPPLEMENTARY DATA

Table S1. Genome sequence databases used for identification of putative OVATEs

Arabidopsis thaliana	**TAIR http://www.arabidopsis.org/index.jsp**
Oryza sativa	**Rice Genome Annotation http://rice.plantbiology.msu.edu/blast.shtml**
Solanum lycopersicum	**SGNhttp://solgenomics.net/tools/blast/**
Solanum tuberosum	**SGNhttp://solgenomics.net/tools/blast/**
Zea mays	**Phytozome http://www.phytozome.net/** **The TIGR Maize Database http://maize.jcvi.org/**
Populus trichocarpa	**Phytozome http://www.phytozome.net/**
Mimulus guttatus	**Phytozome http://www.phytozome.net/**
Vitis vinifera	**Phytozome http://www.phytozome.net/** **Genoscopehttp://www.genoscope.cns.fr/externe/GenomeBrowser/Vitis/**
Prunus persica	**Phytozome http://www.phytozome.net/**
Carica papaya	**Phytozome http://www.phytozome.net/**
Aquilegia coerulea	**Phytozome http://www.phytozome.net/**
Selaginella moellendorffii	**Phytozome http://www.phytozome.net/**
Physcomitrella patens	**Phytozome http://www.phytozome.net/**

Table S3. Primers used in quantitative real-time PCR

Primer name	Sequences
ACTIN-F	5’- TTCCGTTGCCCAGAGGTCCT-3’
ACTIN-R	5’- GGGAGCCAAGGCAGTGATTTC-3
QOV1-F	5’- CTCTTCCCCAAAATCCTAAT-3’
QOV1-R	5’- TCTGATCTACAACACCCAAC-3’
QOV2-F	5’- TCCTCGTCGTCCTCATCACCATCTT-3’
QOV2-R	5’- TCGTGTAATCAGTTCTACAGTCGCA-3’
QOV3-F	5’- GGAGGAGAGAATAGCGGAAA-3’
QOV3-R	5’- CGGACTGGAATCATTGTAAG-3’
QOV4-F	5’- GGGTCGTTGTTATTCTGAG-3’
QOV4-R	5’-ACTAGTTCCACCTGTTTCC-3’
QOV5-F	5’-CCTCAACCCCACATCACCCTT-3’
QOV5-R	5’- GAACCAGCCACTATCAACAGA-3’
QOV6-F	5’-AAAAGACTCCGACGACCC-3’
QOV6-R	5’-TCAGTAAAAGCCCTAACG-3’
QOV7-F	5’- TCAAAATCCACTTTCGACCA-3’
QOV7-R	5’- CATCACTACTAAAAATACCT-3’
QOV8-F	5’- CAGTGTTCTTTGACCCCTTTG-3’
QOV8-R	5’- CTTTCTGATCTAGCCCCTTTT-3’
QOV9-F	5’- CCTCCAATATTAACCAAGCC-3’
QOV9-R	5’- TGTTCTCAATTTCACCCCAG-3’
QOV10-F	5’- AACCATCACAAAACCCCCA-3’
QOV10-R	5’-TACCGAATCCTTGAACAGC-3’
QOV11-F	5’- TTATCAGAAATCATTCAGCCC-3’
QOV11-R	5’- AATCCTTCACCACCGCCACAC-3’
QOV12-F	5’- TTCTGTTACCAACTACGTCTCAGTC-3’
QOV12-R	5’- GGAAATCTAATTCAGGGAATTTATC-3’
QOV13-F	5’- CTTTTTAGACCCTTCAAACACTG-3’
QOV13-R	5’- GAACCCCTTTAATGATTAACTCC-3’
QOV14-F	5’- AGACAAGTGGCAACATTTTATCAAGAC-3’
QOV14-R	5’- AAGGAGTAAGAGATTTTCCTACGAGGT-3’
QOV15-F	5’- CAACATTTACAACTCCACTT-3
QOV15-R	5’- TCTTTCTCTAATCTCAACCC-3’
QOV16-F	5’- CTTCAATCTTTGTTTCACTA-3’
QOV16-R	5’- AAAATGCATACTATGATGTT-3’
QOV17-F	5’- TTTGAAGAAACAGAGGAAGAA-3’

QOV17-R	5’- GCGGAATCAGAGCTGGGAATG-3’
QOV18-F	5’- CTCCTATGCTATGTAGATTGC-3’
QOV18-R	5’- ACTTGTTTTTTCACCTGACTC-3’
QOV19-F	5’- TCACAACATTTTCAACTCTCA-3’
QOV19-R	5’- GGTAGAAACTCGAGCCTCTTA-3’
QOV20-F	5’- AATAGTAGTCACGGGTTTGT-3’
QOV20-R	5’- CCTCATAAGGATCCCTCGAT-3’
QOV21-F	5’- ATTGCCACGTTGTGGTAACCT-3’
QOV21-R	5’- GCCTCGAAATAGAACCTCTTT-3’
QOV22-F	5’- TCCTCTTTTTCTCCATTTTTA-3’
QOV22-R	5’- ACTAGTTTTTTCACCTGCCTC-3’
QOV23-F	5’-ATGTTTGGTCCATTCCCAGA-3’
QOV23-R	5’-TTCGAACGATAACCTCCTTG-3’
QOV24-F	5’- TGATGATAATGAAGCGGAAAT-3’
QOV24-R	5’-TGCAATGAAAAAACGACGAGA-3’
QOV25-F	5’- TTCCTTCACCAATTACTCCA-3’
QOV25-R	5’- TATATCCCTCATTTTCCCTT-3’
QOV26-F	5’- AAAGCACCATTTCCATCACC-3’
QOV26-R	5’- CCACAATCGTTTCCACCAGA-3’

Table S4. Average ω ratios of each subgroup

Subgroup	ω (one ratio model)
1	0.23
2	0.14
3	0.13
4	0.12
5	0.15
6	0.13
7	0.13
8	0.13
9	0.07
10	0.08