

Supplementary Materials:

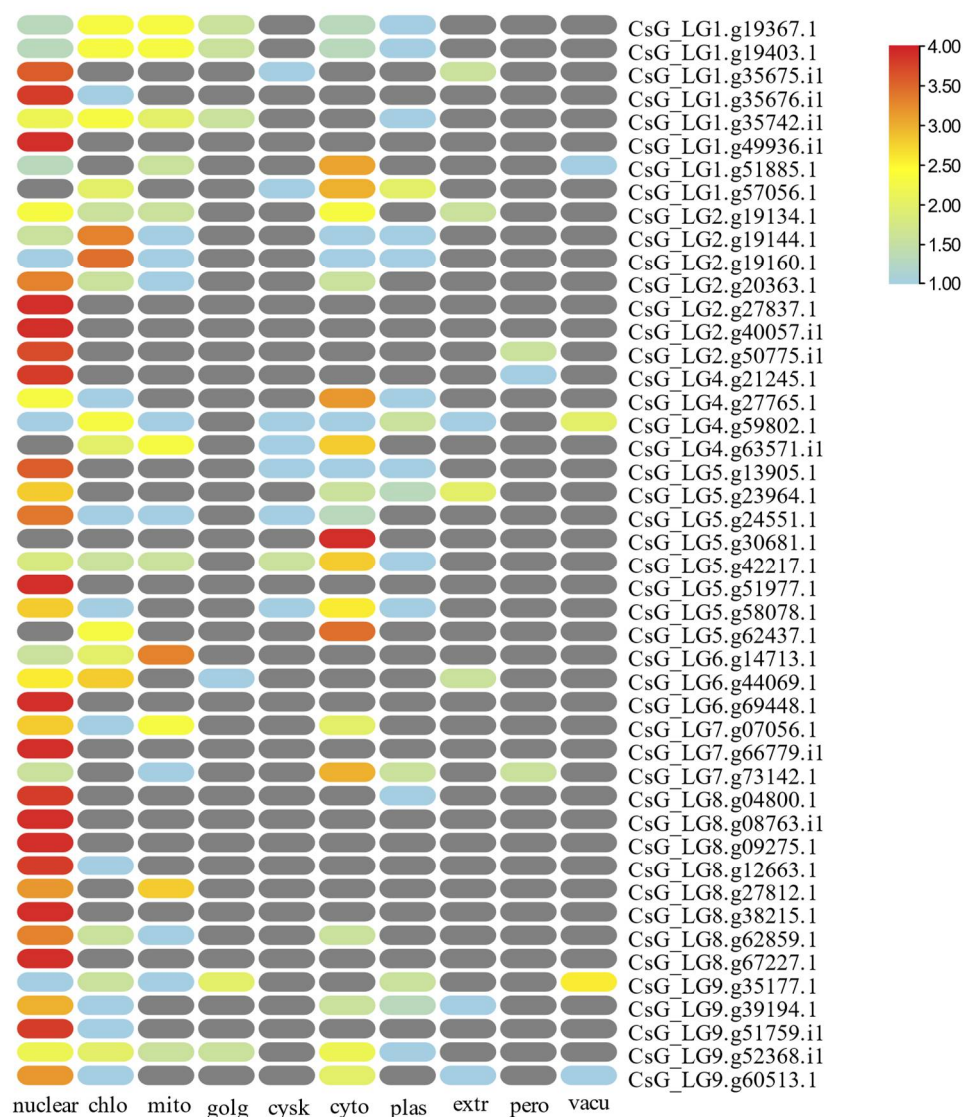


Figure S1. Heat map of predicted subcellular location of *CsNF-Ys*.

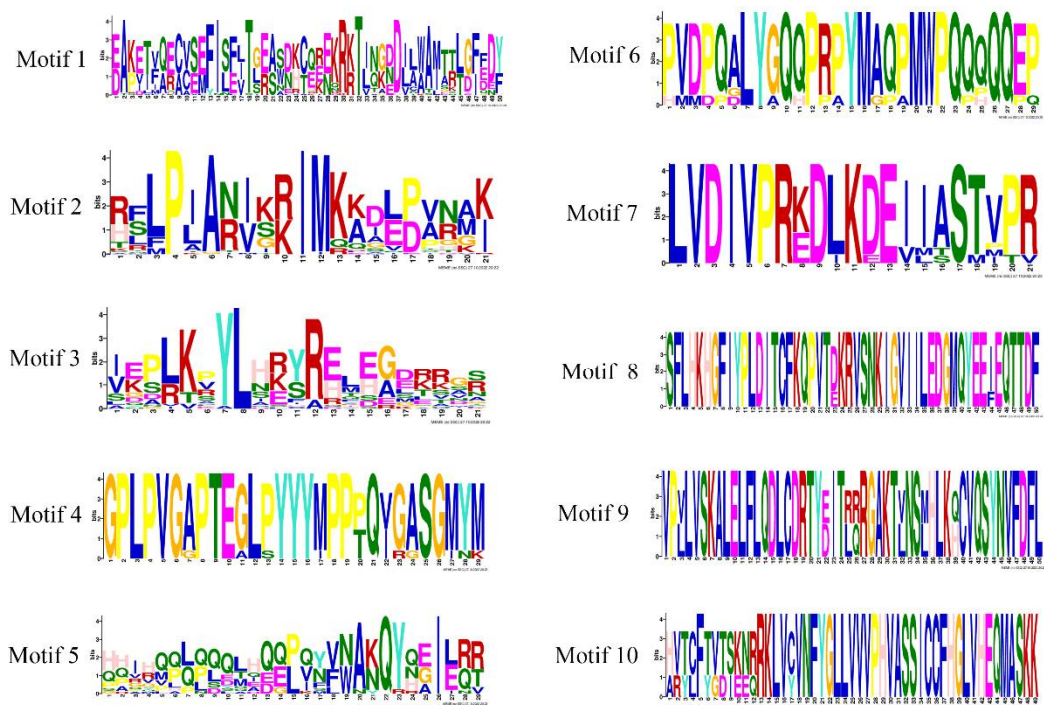


Figure S2. Details of 10 Motifs of CsNF-Y family genes

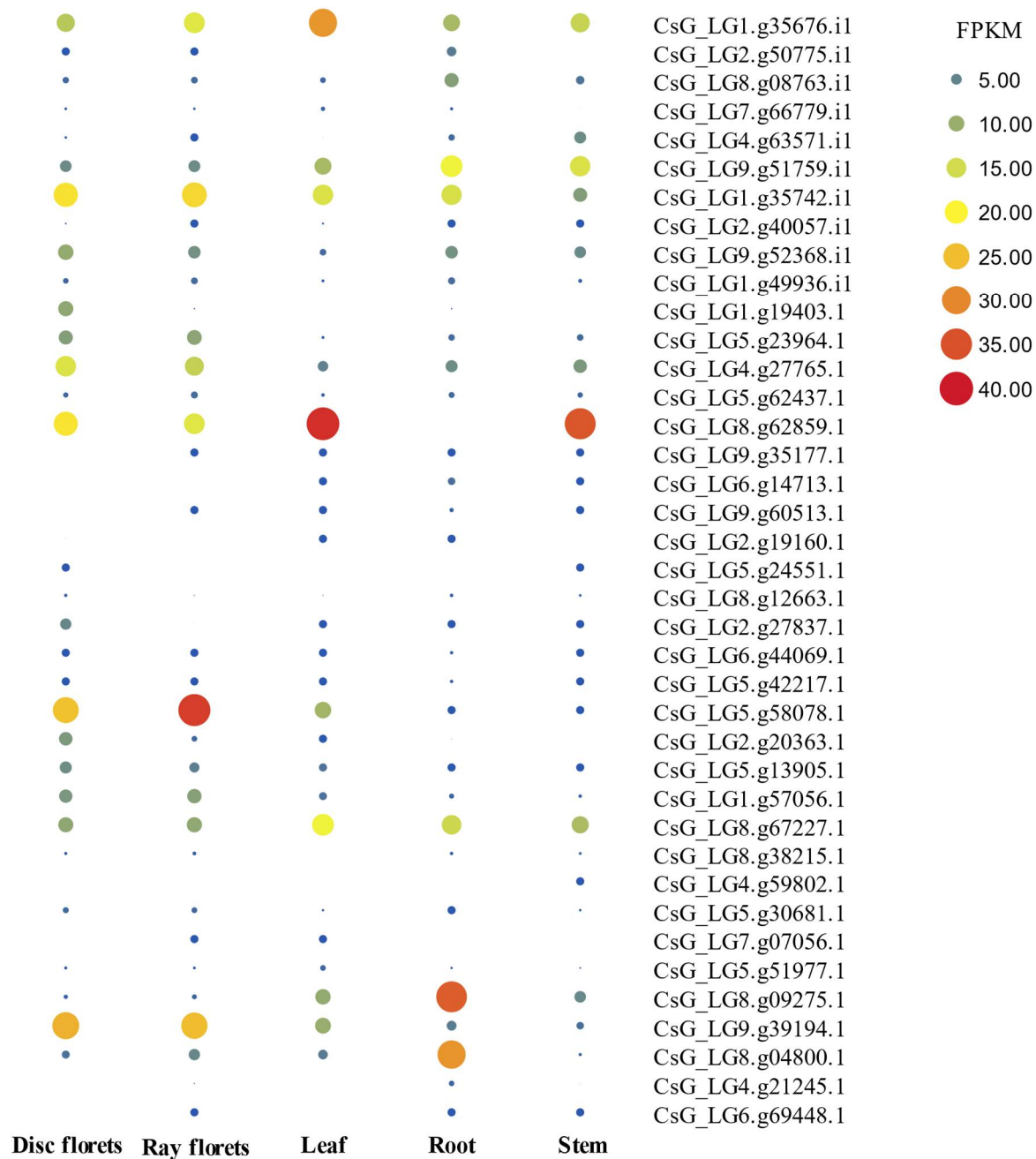


Figure S3. Expression patterns of *CsNF-Y* genes in five chrysanthemum organs.

Table S1. Ka/Ks ratios of tandemly and segmentally duplicated *CsNF-Ys*.

No.	Seq_1 Gene ID	Seq_2 Gene ID	Ka	Ks	Ka/Ks	EffectiveLen	Average S-sites	Average N-sites
1	CsG_LG1.g49936.il	CsG_LG6.g69448.1	0.1517 60989	0.8622 55824	0.1760 04597	519	113.83	405.17
2	CsG_LG2.g40057.il	CsG_LG8.g04800.1	0.1760 91858	0.6443 49239	0.2732 86359	753	170	583

Table S 2. Primers sequences used in this study.

Primer name	Sequence (5'-3')
CsEF1a-RT-F	AGACGATCTGGAAAGGAGATAGAG
CsEF1a-RT-R	TCATGTCACGCACAGCAAAC
CsG_LG8.g04800.1-RT-F	CAGGTATGAAGCGTGTGAAT
CsG_LG8.g04800.1-RT-R	CCACTGCTGTCCTAAAGAAG
CsG_LG9.g39194.1-RT-F	ACTATATGCCTCCACCACAA
CsG_LG9.g39194.1-RT-R	GGTTCTTGTTGTTGCTGTTG
CsG_LG8.g09275.1-RT-F	AGACTCAAGAACTCAACCC
CsG_LG8.g09275.1-RT-R	ATCTGTTTTCTTGCTGGTGG
CsG_LG8.g67227.1-RT-F	ATGGGGAATAATGGAGGGGG
CsG_LG8.g67227.1-RT-R	CCGAACCCATTTTACCACTC
CsG_LG5.g13905.1-RT-F	ATCAACAAGACCAGGGGCAG
CsG_LG5.g13905.1-RT-R	TGAAGGAAGACCCACCGACT
CsG_LG5.g58078.1-RT-F	CCCTATCCTCCAAACCAAAT
CsG_LG5.g58078.1-RT-R	TTGCTGGTGAATGTGCTGAT
CsG_LG8.g62859.1-RT-F	CCACCTTACCAACATCTCCTCCAA
CsG_LG8.g62859.1-RT-R	AAGATAGGTGCCTCGGCTGAA
CsG_LG4.g27765.1-RT-F	CGTATTACTATATGCCTCCACCA
CsG_LG4.g27765.1-RT-R	GTTCTTGTTGTTGCTGTTGTG
CsG_LG5.g23964.1-RT-F	TTGGGGCTTCAGGGATGTAT
CsG_LG5.g23964.1-RT-R	TGTGGTTCTTGTTGTTGCTG
CsG_LG1.g19403.1-RT-F	TAACTACGGTGACGAAGAC
CsG_LG1.g19403.1-RT-R	GTAAGTAGATGATGCTCCAG
CsG_LG9.g52368.i1-RT-F	CTGCCATACAACCGCCTACT
CsG_LG9.g52368.i1-RT-R	CACCACTAATGAACCACCACTACT
CsG_LG1.g35742.i1-RT-F	ACCACCACAAGAACCACAG
CsG_LG1.g35742.i1-RT-R	GACCAACCAGGATACTCACTT
CsG_LG9.g51759.i1-RT-F	GGTGAAACAAATGGGGTAAT
CsG_LG9.g51759.i1-RT-R	CTTGTTTGCTTGTTGATGC
CsG_LG8.g08763.i1-RT-F	TCTGCTGCTTATGGACCTCAA
CsG_LG8.g08763.i1-RT-R	CGCCTGATTATTCCGTGATACTG
CsG_LG1.g35676.i1-RT-F	TAGTGAAAGTGAGAACCAGC
CsG_LG1.g35676.i1-RT-R	CTGAGTTGGGTATTGGATGT
CsG_LG1.g49936.i1-RT-F	CAACCTGATTATCGTGAACA
CsG_LG1.g49936.i1-RT-R	CCTTGCATCTGAACCATC
CsG_LG2.g40057.i1-RT-F	GGCAGGTATGATAATGGAGATA
CsG_LG2.g40057.i1-RT-R	GCGATGTCTGGTTGGATG
CsG_LG2.g20363.1-RT-F	TCAAACAAGCCTATGATGGA
CsG_LG2.g20363.1-RT-R	CTATGAATCCGAAGGTGACT
CsG_LG1.g57056.1-RT-F	TCATCTGTCGTTGGTAAGC
CsG_LG1.g57056.1-RT-R	TCGGTAGTCGGTACTTCTT