

**Table S1.** Summary of the transcriptome sequencing data.

<b>Sample</b>	<b>Clean</b>	<b>Clean</b>	<b>Clean</b>	<b>Clean</b>	<b>Clean</b>	<b>Clean</b>	<b>Mapped Reads</b>
<b>Name</b>	<b>Reads</b>	<b>Bases (Gb)</b>	<b>N (%)</b>	<b>GC (%)</b>	<b>Q20</b>	<b>Q30</b>	<b>(Mapped/Clean)</b>
					<b>(%)</b>	<b>(%)</b>	
<b>T54C-1</b>	30962081	9.29	0.00	46.74	98.34	95.47	72.70%
<b>T54C-2</b>	27469179	8.24	0.00	46.80	98.2	95.11	72.30%
<b>T54M-1</b>	28243036	8.47	0.00	46.56	98.34	95.48	73.00%
<b>T54M-2</b>	24472981	7.34	0.00	45.08	98.12	95.06	71.60%
<b>T54S-1</b>	25153030	7.55	0.00	46.27	98.33	95.43	72.60%
<b>T54S-2</b>	23124261	6.94	0.00	46.63	98.41	95.62	72.90%

Note: T54C, T54M and T54S represented the samples of the Ogura-CMS, DGMS and maintainer lines, respectively.

**Table S2.** The KEGG pathways enriched for the DEGs.

Term	Sample	ID	Input No	Background No	<i>p</i> -Value	Corrected <i>p</i> -Value	Up/Down
Photosynthesis -antenna proteins	T54M vs T54S	ko00196	7	35	0.00000	0.00004	up
Plant hormone signal transduction	T54M vs T54S	ko04075	15	548	0.00185	0.05459	up
	T54C vs T54S	ko04075	26	548	0.00000	0.00009	up
Phenylpropanoid biosynthesis	T54M vs T54S	ko00940	14	272	0.00025	0.02413	down
	T54C vs T54S	ko00940	25	272	0.00000	0.00019	down
ABC transporters	T54M vs T54S	ko02010	5	33	0.00036	0.02413	down
	T54C vs 54M	ko02010	4	33	0.00145	0.06517	up
Fatty acid elongation	T54C vs 54M	ko00062	5	41	0.00036	0.04808	up
Fatty acid metabolism	T54C vs 54M	ko01212	12	127	0.00036	0.03038	down
	T54C vs T54S	ko01212	13	127	0.00015	0.00754	down
Flavonoid biosynthesis	T54C vs 54M	ko00941	7	45	0.00045	0.03038	down
	T54C vs T54S	ko00941	8	45	0.00010	0.00680	down

<b>Polycyclic aromatic</b>	T54C vs						
		ko00624	8	110	0.00072	0.01574	up
<b>hydrocarbon degradation</b>	T54S						

**Table S3.** SNP distribution in genomic regions of the Ogura-CMS, DGMS and maintainer broccoli lines.

Sample	Exonic	Splicing	5'	3'	Intronic	Upstream	Downstream	Intergenic
Name		Site	UTR	UTR				
T54C-1	52.66%	0.40%	6.63%	9.82%	7.60%	2.32%	3.71%	16.86%
T54C-2	52.92%	0.40%	6.60%	9.61%	7.72%	2.25%	3.45%	17.05%
T54M-1	53.29%	0.40%	6.32%	10.10%	7.11%	2.24%	3.59%	16.95%
T54M-2	51.41%	0.35%	5.52%	10.89%	7.52%	2.44%	4.33%	17.55%
T54S-1	53.57%	0.40%	6.52%	10.18%	7.66%	2.12%	3.42%	16.13%
T54S-2	55.21%	0.41%	6.66%	9.98%	7.01%	2.06%	3.10%	15.56%

Note: T54C, T54M and T54S represent the samples of the Ogura-CMS, DGMS and maintainer lines, respectively.