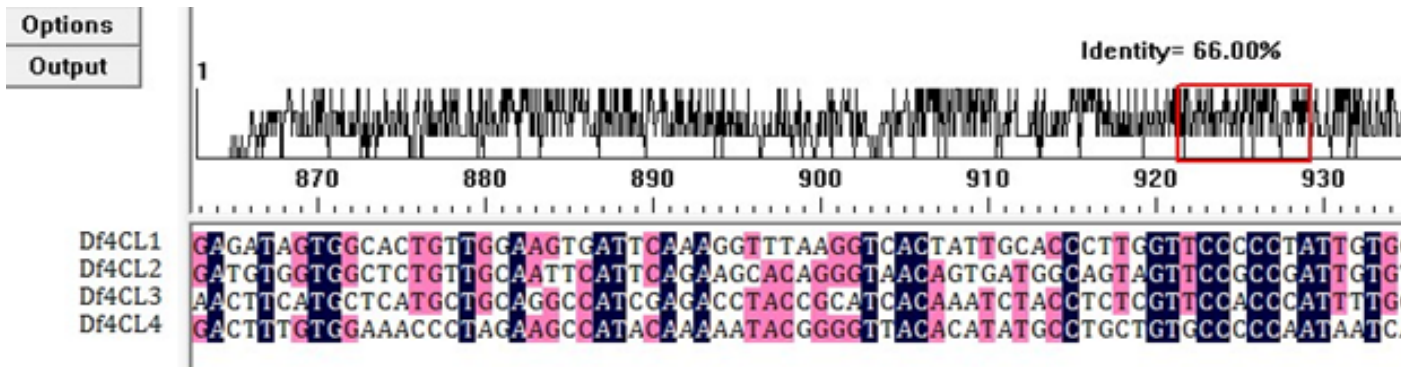


Supplementary Figure 1. Comparison of nucleic acid sequence of 4CL gene family of *D. fragrans*.



Supplementary Figure 2. Comparison of amino acid sequences of 4CL gene family of *D. fragrans*.

Supplementary Table 1. Expression of Df4CL genes in mature gametophyte.

Gene	Relative expression
Df4CL1	0.15343±0.00585c
Df4CL2	0.25982±0.00900d
Df4CL3	0.00135±0.00032a
Df4CL4	0.07056±0.00024b

N=3 F=1288.59 P<0.05

Supplementary Table 2. Expression of Df4CL genes in petioles at the sporophyte.

Gene	Relative expression
Df4CL1	2.82847±0.01961c
Df4CL2	8.53668±0.72547d
Df4CL3	0.00070±0.00089a
Df4CL4	1.37857±0.36000b

N=3 F=102.857 P<0.05

Supplementary Table 3. Expression of Df4CL genes in root at the sporophyte.

Gene	Relative expression
Df4CL1	0.39671±0.06032a
Df4CL2	2.91285±0.2535b
Df4CL3	0.00022±0.00030a
Df4CL4	0.2357±0.00010a

N=3 F=117.257 P<0.05

Supplementary Table 4. Expression of Df4CL genes in leaf at the sporophyte.

Gene	Relative expression
Df4CL1	0.51102±0.02832a
Df4CL2	1.69043±0.38533b
Df4CL3	0.00021±0.00024a
Df4CL4	0.12897±0.00223a

N=3 F=17.670 P<0.05