

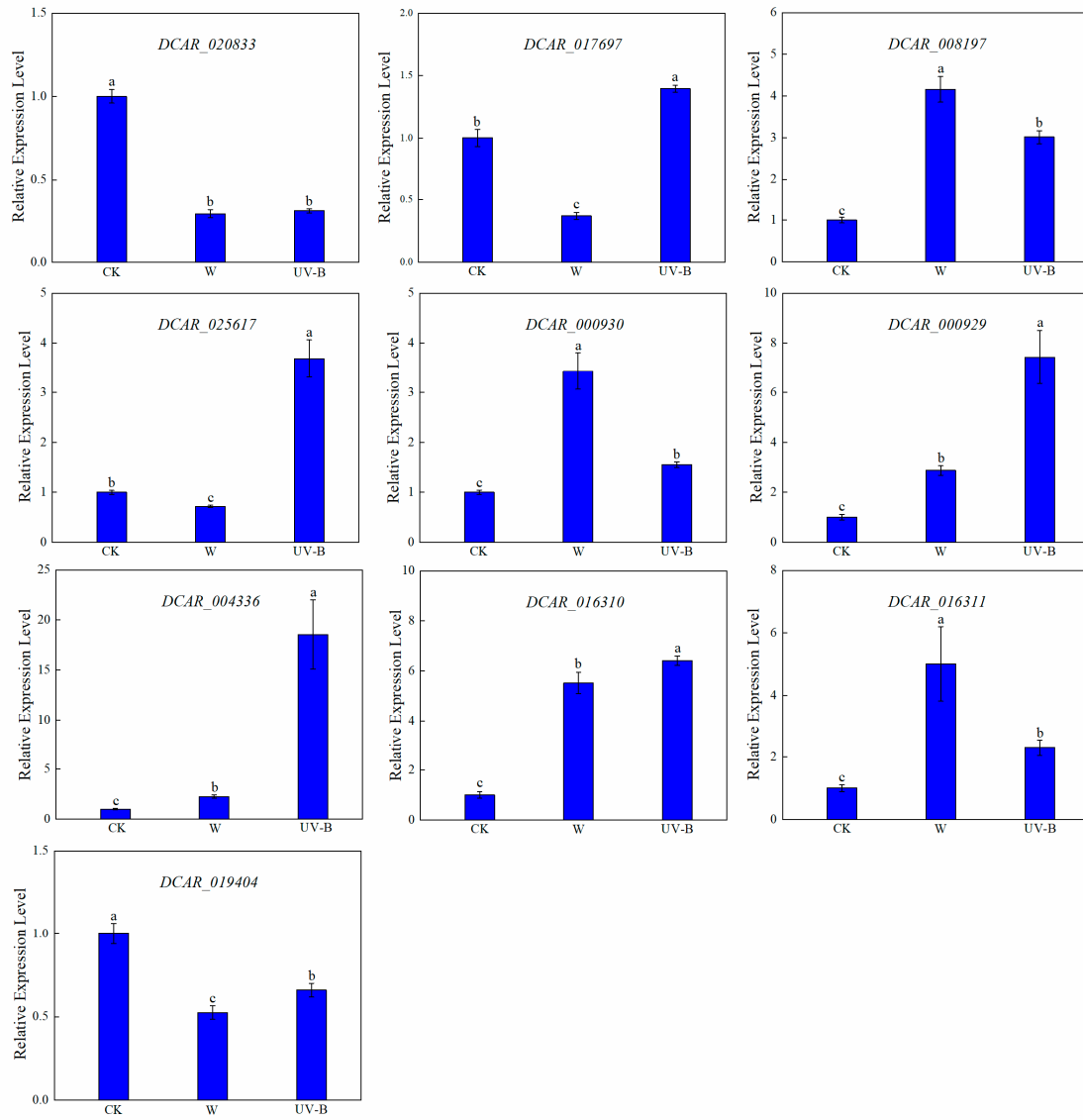
Supplementary Table S1. Primers of the 10 genes encoding the INV in carrot.

Gene ID		Primer Sequence (5'-3')
<i>LOC 108204362</i>	F	ATAATGATGCGGCCTGATGGTGTC
	R	GCCAATCCACGGTCACTCTTCAAG
<i>LOC 108204365</i>	F	AACAGCCGAGCAGAACATCTTACC
	R	AGGGTTGTGCTGGTAGTACAAATGG
<i>LOC 108206477</i>	F	TCTCATCATCCGTACACTCCTCTCC
	R	CCCCTCAACACAAGCACAACTTC
<i>LOC 108207625</i>	F	CCAAAGCACCGTCTCTCACAGTC
	R	CCGCACCGTAACCGTTTGATAGC
<i>LOC 108216856</i>	F	AAAGTCCGTCAGTGATGGTGATGC
	R	GTTCCAAGTGCTCTGGCAACATTG
<i>LOC 108218454</i>	F	GCCTGCCATCGTTCCTTCCAAG
	R	GCCCTTCTGTGATTCCAGTGTAGAG
<i>LOC 108218455</i>	F	GCGACTATCCTTCCAGGTAACAAGC
	R	ATCAGAAAGGTTGGCGGGAATAGC
<i>LOC 108218494</i>	F	ATGTTGGTGGCGTTTGGAGTGG
	R	GATTAAGGAGCCTGCTGGTGTAGAG
<i>LOC 108222817</i>	F	GAAACCCGACACGAACCCGATC
	R	TGGCGAGGAGAACTAGACACG
<i>LOC 108222818</i>	F	GAGCAAGCATGGAGATGGGTGTC
	R	ATCATTGGTCCACGGATAAGCCTTC
<i>DcActin1</i>	F	CGGTATTGTGTTGGACTCTGGTGAT
(internal control gene)	R	CAGCAAGGTCAAGACGGAGTATGG

Supplementary Table S2. FPKM values of DEGs associated with the biosynthesis of

phenolic profiles.

Description		Gene ID	FPKM value		
			CK	W	UV-B
DAHP synthase	1	<i>DCAR_019217</i>	22.68972	9.410703	24.3135
3DD	2	<i>DCAR_001933</i>	1.017389	0.29037	0.828857
SD	3	<i>DCAR_001933</i>	1.017389	0.29037	0.828857
EPSP synthase	4	<i>DCAR_008553</i>	89.05397	36.82218	38.0462
ADT, PDT	5	<i>DCAR_012164</i>	5.716345	8.639757	19.60338
TAT	6	<i>DCAR_021258</i>	13.73928	27.12095	37.18832
PAL	7	<i>DCAR_020833</i>	952.9402	340.3347	358.0807
	8	<i>DCAR_017697</i>	11.45229	5.874568	15.56136
4CL	9	<i>DCAR_008197</i>	1.92583	7.564099	6.874249
	10	<i>DCAR_025617</i>	0.527646	0.423012	1.937676
HCT	11	<i>DCAR_000930</i>	0.225357	2.867585	0.651622
	12	<i>DCAR_000929</i>	1.754699	7.635153	8.723142
	13	<i>DCAR_004336</i>	0.305031	1.056168	3.339134
	14	<i>DCAR_016310</i>	1.471887	7.229892	15.04828
	15	<i>DCAR_016311</i>	0.007103	0.087532	0.054494
	16	<i>DCAR_019404</i>	23.59468	4.418665	3.508652
C3'M	17	<i>DCAR_007257</i>	18.64953	8.454522	13.20871
CSE	18	<i>DCAR_025466</i>	0.962872	3.084319	8.622196
	19	<i>DCAR_016250</i>	8.797688	21.90555	36.4779
COMT	20	<i>DCAR_018996</i>	84.23091	20.98108	5.949939



Supplementary Figure S1. The relative expression levels of 10 selected DEGs.