

Table S1. Gene specific primers used in this study

Usage	Primer name	Primer sequence (5'-3')
Gene cloning	RsPORB-promoter-F	AATGTTTCATGGACAATCCTCCTGATTGT
	RsPORB-promoter-R	TTGAAGGGCCATTTTTGGACAAAACAGAGA
	RsPORB-F	ATGGCCCTTCAAGCCGCTTCTTTGGTC
	RsPORB-R	TTAGGCCAAGCCAACCAGCTTCTCAC
Gene expression	RsPORA-F	ACGGTGAAAAGGCATATAAA
	RsPORA-R	GCTCTCTGAACAAACCTGTC
	RsPORB-F	GACAGAGTCTGGCAAAAGAC
	RsPORB-R	TGATCTCCCAAACCTTTACG
	RsPORC-F	CAGAGAACACATACCCCTGT
	RsPORC-R	CACCTGTGCTAGTCTTTTCC
	RsRP11-F	ATCACGCTAAATGGTCTCCT
	RsRP11-R	GCTGCTCTCAATCAAGTCAATC
Virus-induced gene silencing	pTRV2-RsPORB-F	CGACGACAAGACCCTAAAGATGTAAACTGA
	pTRV2-RsPORB-R	GAGGAGAAGAGCCCTAGCTTTCGGTGGTACGT
	pTRV2-RsPORs-F	CGACGACAAGACCCTAAATGGCACGTGAT
	pTRV2-RsPORs-R	GAGGAGAAGAGCCCTACATGTTGCACACTT
Promoter activation assay	RsPORB-promoter-F	AATGTTTCATGGACAATCCTCCTGATTGT
	RsPORB-dP1-R	GTTTGGATAATTTTCTTGGTTTATAATTTTTA
	RsPORB-dP1-F	TAAAAATTATAAACCAAGAAAATTATCCAAAC
	RsPORB-dP2-R	CTTTGGCATGGGAGAAGAAGAAGATATCCTACAA
	RsPORB-dP2-F	TTGTAGGATATCTTCTTCTTCTCCCATGCCAAAG
	RsPORB-promoter-R	TTGAAGGGCCATTTTTGGACAAAACAGAGA
	pUC-RsPORB-fLUC-F	AGGCTCTAGAGGATCCAATGTTTCATGGACAATCC
	pUC-RsPORB-fLUC-R	TTGGCGTCTTCCATGGTTTTGGACAAAACAGA

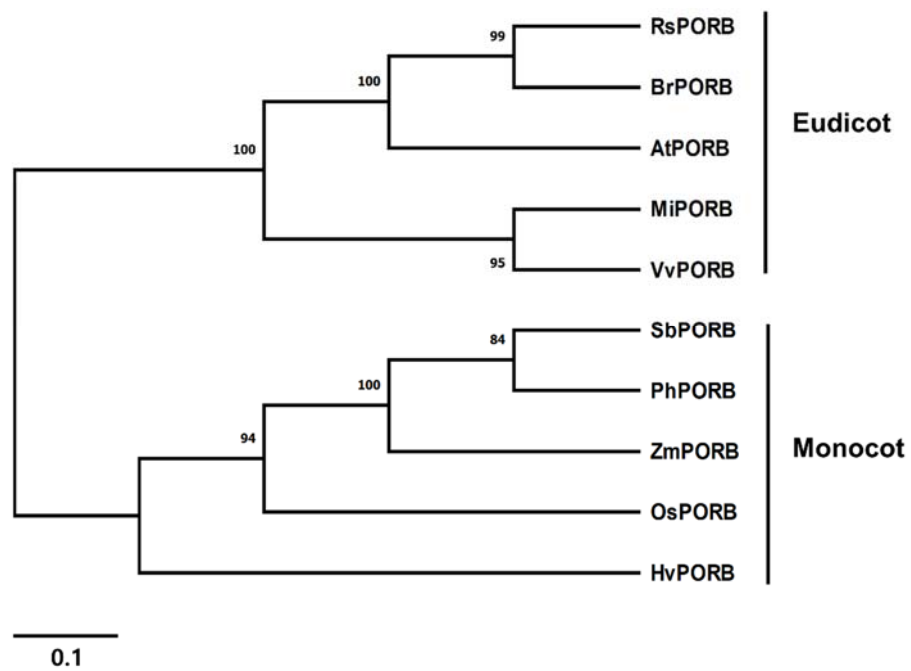


Figure S1. Phylogenetic relationships among PORB proteins from radish and other plants. The phylogenetic tree was constructed using the neighbor-joining method with MEGAX software. Numbers next to the nodes are bootstrap values from 1000 replications.

A

proRsPORB-G1

```

-1000      AATGTTTCATG GACAATCCTC CTGATTGTCA AACTCTTCGT
-960 AAGGGTGTCT TCGCTGCGGG TGCCCTCCTTT GTCTTCTTCA ACGCCATTGT TTCTCAGTTC
-900 TATTATTTCT TCTACTCCTC TGCTGCTGCC GCCTCCCTCT CGCCTTACTA GAGGATTTGA
-840 ACCAATAAAA ATAAGTTTGT TTATTTCTTA TGTGTTATGT GATATCATAC TAATGTCATA
-780 TCTTGGGCCT GTTGCTTGTT AAAGTATATG ACTGCAAAAT TACTTGAAGT TGAGGGTACG
-720 ACTATGAGTT TTGTTAGATG GATTTGTATG GATATTGAAT TGAAATGTTG TTCTTAAAAA
-660 GCTGATCTAA TGTGGTTTTT ACCGAACAAA AAAAAACCAG TGTGCTAGAC TGCTGTGCTA
-600 TATGTTATAT ATTTGTTAAT TCAACACATG TTAGAAGTTT TATATATGCA ACTAATAGTT
-540 GTAAGATGAT GGTAAGCAT GAACAATATG ATAAATAATA TATGCTTTTA TTACCTTAAA
-480 TTTTGAAAAT TGCTTGTTAA ATTTTCAGTTA CACTTTAAAA TTACTTCGAA TTATATACAC
-420 AAAAATTATA AACCAAGAAA ATTATCCAAA CATATCAGAG TAACCATGAC GAATAGTTTG
-360 TAAGATATCT TCTTCTCCCA TGCCAAAGTA TGAATCCCA TGAACA CCAA TCACCATCCT
-300 TTATTGCAAT GTTACCAAAA CAGCCAATAA AATAAAATAT CTACTGAGAG GAAAATCTAG
-240 CCCTCGAATT CTCATTGGAT ATCTAATGAT GATGTGGCAG ATACTTTCTT TAAGATAATG
-180 TTATCCACAC ATCTTCTCTG TGATTTCTCT GGGGACCACT CTCTCCCTTG TCCGAATTC
-120 TCACCTCCTC CACTCCTTCG CGAGTATACA TAAACGCGTC TACACTCTCG CAAAATATCA
-60 ACTTCAGTAG TCTTCTTCTT CATTGCTATT GCTATCTCTC ACTCTCTGTT TTGTCCAAAA

```

CCAAT motif Dof CAACA motif

B

proRsPORB-W1

```

-1038      AATGTTCA TGGACAATCC
-1020 TCCTGATTGT CAAACTCTTC GTAAGGGTGT CTTCGCTGCG GGTGCCTCCT TTGTCTTCTT
-960 CAACGCCATT GTTCTCAGT TCTATTATTT CTCTACTCC TCTGCTGCT CCGCCTCCCT
-900 CTCGCCTTAC TAGAGGATTT GAACCAACAA AAATAAGTTT GTTTATTTCT TGTGTTATGT
-840 GATACCATAC AAATGTCATA TTTTGGGCCT GTTGCTTGTT AAAGTATATG ACTGCAAAAT
-780 TACTTGAAGT TGAGGGTACG ACTATGAGTT TTGTCAGATG GATTTGTATG GATATTGAAT
-720 TGAAATGTTG TTCTTAAGAA GCTGATCTAA TGTGGTTTTT ACCAAACAAA AAAAATCAG
-660 TGTGCTAGAC TGCTATATGT TATATTTGTT AATTCAACAC ATGTTACAAG TTTTATAAAT
-600 GCAACTAATA GTTGTAAGAT GATGGCAGAG CATGAACAAT ATGATAGATA ATAATATATG
-540 TCTTTATTAC CTTGAAAATA GAAAATTGCT TGTTAAATTT CAGTTACACT TTAAATTTAC
-480 TTTGAGTTAT ATGAATAAAA ATTATAAAC AACAAAATGG GAAAATTATC CAAACATATC
-420 AGAGTAACCA TGACGAATAG TTTGTAGGAT ATCTTCTTGT CAAAAGAAA AAAGAAAAG
-360 AAAGAAAT CTTCTTCTCC CATGCCAAAG TATGGAATCC CATAAACACC AATCACCATC
-300 CTTTATTGCA ATGTTACCAA AACAGCCAAT AAAATAAAAT ATCTACTGAG AGGGAAATCT
-240 AGCCCTCGAA TTCTCATTGG ATATCTAATG ATGATGTGGC AGATACTTTC TTAAAGATAA
-180 TGTATCCAC ACATCTTCTC TCTGATTCT CTGGGGACCA CTCTCTCCCT TGTCGAACT
-120 TCACCTCCTC CACTCCTTCA CGAGTATACA TAAACGCGTA CACACTCTCG CAAAATATC
-60 AACTTCAGTA GTCTTCTTCA TCGCTATTGC TATCTCTCTC AACTCTGTT TTGTCCAAAA

```

CCAAT motif Dof CAACA motif

C

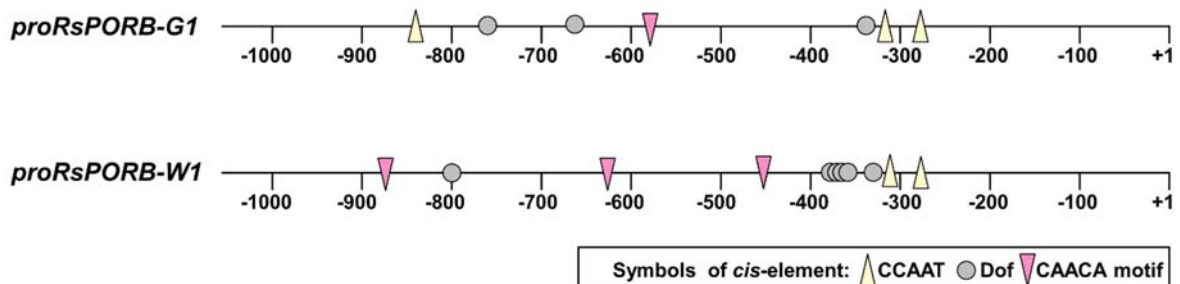


Figure S2. Nucleotide sequences of *RsPORB* promoters from radish cultivars G1 and W1. Partial promoter of *RsPORB-G1* (A) and *RsPORB-G1* (B). Putative several *cis*-elements are indicated by different colors. The CCAAT motif is indicated by a yellow box, Dof motif by dark grey boxes, and CAACA motif by pink boxes. (C) Schematic of the proRsPORB-G1 and proRsPORB-W1 showing putative *cis*-elements involved in chlorophyll biosynthesis. The *cis*-elements are indicated by different symbols.