

Supplementary Materials

Table S1: List of the analysed samples with details concerning the geographical origins, the CGN accession numbers, the GenBank Accession Number and the specimen voucher.

Taxa	Origin	CGN_Accession number	GenBank Accession Number	Specimen voucher
<i>Brassica nigra</i>	Germany	CGN06624	LR217828 (<i>matK</i>); LR217834 (B)	Bni_01
	Greek	CGN06619	LR217829 (<i>matK</i>); LR217835 (B)	Bni_02
	Germany	CGN06620	LR217830 (<i>matK</i>); LR217836 (B)	Bni_03
<i>Brassica juncea</i>	Germany	CGN06616	LR217822 (<i>matK</i>); LR217843 (A6); LR217837 (B)	Bju_01
	Sweden	CGN12009	LR217823 (<i>matK</i>); LR217844 (A6), LR217838 (B)	Bju_02
	Germany	CGN06615	LR217824 (<i>matK</i>); LR217845 (A6); LR217839 (B)	Bju_03
<i>Brassica napus</i>	Netherlands	CGN13917	LR217825 (<i>matK</i>); LR217846 (A6); LR217840 (C1)	Bna_01
	France	CGN14113	LR217826 (<i>matK</i>); LR217847 (A6); LR217841 (C1)	Bna_02
	Germany	CGN12014	LR217827 (<i>matK</i>); LR217848 (A6); LR217842 (C1)	Bna_03
<i>Sinapis alba</i>	Italy	CGN11981	LR217831 (<i>matK</i>); LR217819 (ITS2)	Sal_01
	Sweden	CGN06662	LR217832 (<i>matK</i>); LR217820 (ITS2)	Sal_02
	Germany	CGN11969	LR217833 (<i>matK</i>); LR217821 (ITS2)	Sal_03

Table S2. Percentages of the average Kimura two-parameter (K2) distance, range of K2P distances, standard error (SE), and range for each tested marker. Overall mean distances and intraspecific and interspecific comparisons are indicated.

Locus	Intraspecific comparison		Interspecific comparison	
	Mean % variation (SE%)	Range (%)	Mean % variation (SE%)	Range (%)
<i>rbcL</i>	0.75 (0.1)	0-3.0	1.05 (0.29)	0-1.8
<i>matK</i>	0 (0)	0	1.01 (0.28)	0.2-1.5
<i>psbA-trnH</i>	4.6 (1.66)	1.0-8.0	17.67 (2.98)	7.0-25.0
<i>ITS2</i>	1.5 (0.75)	0-3.0	3.95 (0.31)	3.25-5.4

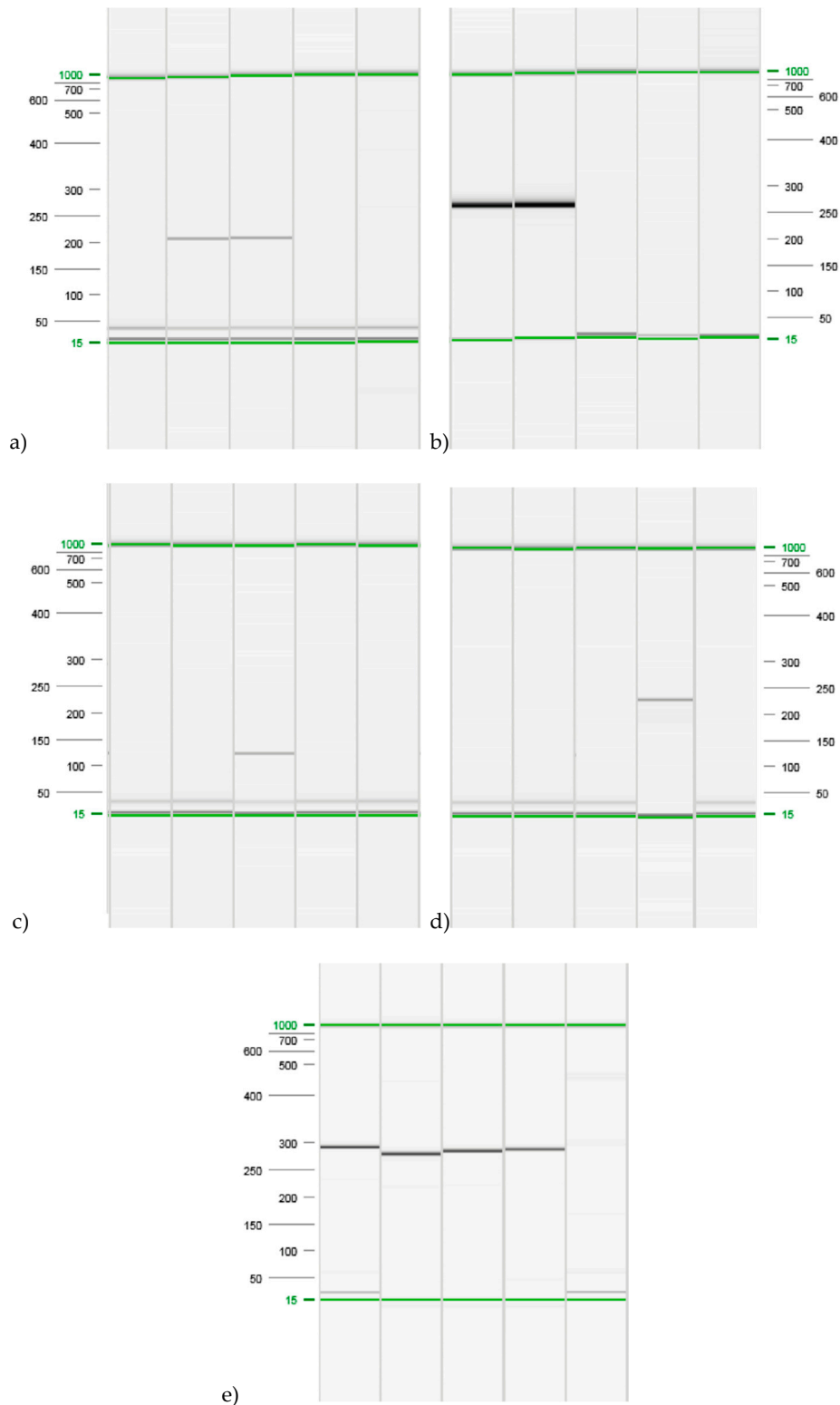


Figure S1: Amplification products obtained by the set of primers considered in this work. a) Primer A6: Lane 1: *Brassica nigra*, lane 2: *Brassica juncea*, lane 3: *Brassica napus*, lane 4: *Sinapis alba*, lane 4: Negative control; b) Primer B: Lane 1: *Brassica nigra*, lane 2: *Brassica juncea*, lane 3: *Brassica napus*, lane 4: *Sinapis alba*, lane 4: Negative control; c) Primer C1 : Lane 1: *Brassica nigra*, lane 2: *Brassica juncea*, lane 3: *Brassica napus*, lane 4: *Sinapis alba*, lane 4: Negative control; d) Primer S.alba ITS2: : Lane 1: *Brassica nigra*, lane 2: *Brassica juncea*, lane 3: *Brassica napus*, lane 4: *Sinapis alba*, lane 4: Negative control; e) Primer Bras_matK: : Lane 1: *Brassica nigra*, lane 2: *Brassica juncea*, lane 3: *Brassica napus*, lane 4: *Sinapis alba*, lane 4: Negative control.