Table S2. Chlorophyll (Chl) *a*:*b* ratio and molar ratios of individual carotenoid components to total Chl (mol mol^{-1}) in needles of *Cryptomeria japonica* from five provenances (Prv) grown in two common gardens (CG), along with statistical summary.

Season	Provenance	CG	Chl *a*:*b*	Lut/Chl	β-Car/Chl*a*	Total Car/Chl
Summer	AJG	Ksm	3.32±0.12	0.18±0.01	0.66±0.05	0.76±0.04
		Nrk	3.11±0.14	0.15±0.01	0.57±0.04	0.67±0.03
	AZJ	Ksm	2.90±0.15	0.20±0.01	0.84±0.07	0.91±0.06
		Nrk	3.20±0.12	0.15±0.01	0.58±0.03	0.68±0.02
	KWZ	Ksm	3.11±0.12	0.19±0.01	0.70±0.04	0.81±0.03
		Nrk	2.96±0.13	0.15±0.01	0.60±0.03	0.69±0.03
	SNG	Ksm	3.09±0.12	0.20±0.01	0.79±0.04	0.89±0.03
		Nrk	3.18±0.08	0.14±0.00	0.52±0.02	0.63±0.02
	YKU	Ksm	3.31±0.13	0.18±0.01	0.66±0.03	0.78±0.02
		Nrk	3.20±0.07	0.14±0.00	0.56±0.02	0.66±0.02
	Statistics (*F* value)					
	Prv		0.20 ^{ns}	0.33 ^{ns}	0.40 ^{ns}	0.38 ^{ns}
	CG		0.20 ^{ns}	69.27***	30.22***	46.31***
	Prv×CG		2.00^{ns}	1.77^{ns}	2.62*	2.65*
Winter	AJG	Ksm	2.32±0.17	0.58±0.06	2.07±0.28	2.89±0.28
		Nrk	1.95±0.12	0.51±0.06	1.56±0.24	2.11±0.25
	AZJ	Ksm	2.25±0.13	0.68±0.06	2.46±0.24	3.80±0.38
		Nrk	2.00±0.10	0.45±0.04	1.47±0.16	2.13±0.21
	KWZ	Ksm	2.32±0.14	0.50±0.05	1.72±0.17	2.55±0.27
		Nrk	2.05±0.09	0.45±0.04	1.53±0.12	2.20±0.22
	SNG	Ksm	2.64±0.16	0.71±0.12	2.19±0.32	3.88±0.78
		Nrk	1.75±0.08	0.45±0.02	1.54±0.11	2.01±0.11
	YKU	Ksm	2.40±0.12	0.43±0.03	1.49±0.12	2.12±0.16
		Nrk	2.03±0.09	0.42±0.03	1.36±0.09	1.82±0.11
	Statistics (*F* value)					
	Prv		0.19^{n}	3.30*	1.79 ^{ns}	3.80*
	CG		45.24***	4.08*	5.56*	10.74**
	Prv×CG		3.06*	1.39^{ns}	1.21^{ns}	1.72 ^{ns}

Total carotenoid (Total Car) includes neoxanthin, lutein (Lut), α-carotene, β-carotene (β-Car), xanthophyll cycle pigments (vioxanthin, antheraxanthin, and zeaxanthin) in summer, and surplus rhodoxanthin in winter. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, ^{ns} not significant