Supplementary materials

Table S1. Variations of basal DCR [13], MS [14] and QL [15] media tested at different stages of *Cryptomeria japonica* micropropagation process, Experiment 1.

Stage	Basal medium	PGRs (μM)	Sucrose (w/v)	AC (g L^{-1})	Agar (g L^{-1})
Induction	DCR	BA (8.8)	3%	-	Difco Agar® granulated (8)
Induction	MS	BA (8.8)	3%	-	Difco Agar® granulated (8)
Induction	QL	BA (8.8)	3%	-	Difco Agar® granulated (8)
Elongation	DCR	-	3%	(2)	Difco Agar® granulated (8.5)
Elongation	MS	-	3%	(2)	Difco Agar® granulated (8.5)
Elongation	QL	-	3%	(2)	Difco Agar® granulated (8.5)
Rooting	Half strength macronutrients QL	NAA (50)	3%	-	Difco Agar® granulated (8)
Rooting	Half strength macronutrients QL	NAA (50)	1.5%	-	Difco Agar® granulated (8)
Root expression	Half strength macronutrients QL	-	3%	(2)	Difco Agar® granulated (8.5)
Root expression	Half strength macronutrients QL	-	1.5%	(2)	Difco Agar® granulated (8.5)

PGRs, plant growth regulators; BA,6-benzyladenine; NAA, 1-naphthalenacetic acid; AC, activated charcoal.

Table S2. Variations of basal QL [15] medium tested at different stages of *Cryptomeria japonica* micropropagation process, Experiment 2.

Stage	Basal medium	PGRs (μM)	Sucrose (w/v)	AC (g L^{-1})	Agar (g L^{-1})
Induction	QL	BA (8.8)	3%	-	Difco Agar® granulated (8)
Induction	QL	m-T (8.8)	3%	-	Difco Agar® granulated (8)
Induction	QL	TDZ (8.8)	3%	-	Difco Agar® granulated (8)
Elongation	QL	-	3%	(2)	Difco Agar® granulated (8.5)
Rooting	Half strength macronutrients QL	NAA (50)	1.5%	-	Difco Agar® granulated (8)
Root expression	Half strength macronutrients QL	-	1.5%	(2)	Difco Agar® granulated (8.5)

PGRs, plant growth regulators; BA,6-benzyladenine; m-T, meta-topolin; thidiazuron, TDZ; NAA, 1-naphthalenacetic acid; AC, activated charcoal.

Table S3. Statistical analysis for the survival (%) showed in *Cryptomeria japonica* per explant type (apical explants of >1.5 cm in length, apical explants of <1.0 cm length, basal explants of >1.5 cm length, and basal explants of <1.0 cm in length) and basal media (DCR [Gupta and Durzan, 1985], MS [Murashige and Skoog, 1962] and QL [Quoirin and Lepoivre, 1977]).

Source	df	Survival (%)	
		X^2 Test	***p*-Value**
Explant type (E)	3	492.11	<0.05*
Basal media (B)	2	490.60	≥0.05 n.s
B x C	6	490.60	≥0.05 n.s

*Significantly different at $p<0.05$, n.s Non-significant at $p<0.05$, df Degrees of freedom.

Table S4. Statistical analysis for shoot induction (%) and number of shoots per explant showed in *Cryptomeria japonica* per explant type (apical explants of >1.5 cm in length, apical explants of <1.0 cm length, basal explants of >1.5 cm length, and basal explants of <1.0 cm in length) and basal media (DCR [Gupta and Durzan, 1985], MS [Murashige and Skoog, 1962] and QL [Quoirin and Lepoivre, 1977]).

Source	df	Shoot induction (%)		Nº shoots /explant	
		X^2 Test	***p*-Value**	***F* Test**	***p*-Value**
Explant type (E)	3	266.95	<0.05*	4.31	<0.05*
Basal media (B)	2	266.00	≥0.05 n.s	9.09	<0.05*
E x B	6	256.35	≥0.05 n.s	2.59	<0.05*

*Significantly different at $p<0.05$, n.s Non-significant at $p<0.05$, df Degrees of freedom.

Table S5. Statistical analysis for root induction (%), number roots per explant and length of longest of *Cryptomeria japonica* shoots cultured in QL medium [Quoirin and Lepoivre, 1977]), supplemented with 3% (w/v) sucrose or 1.5% (w/v) sucrose, according to light treatment.

Source	df	Root induction (%)		Nº roots /explant		Length of longest root	
		X^2 Test	***p*-Value**	***F* Test**	***p*-Value**	***F* Test**	***p*-Value**
Sucrose concentration (S)	1	152.78	≥0.05 n.s	1.38	<0.05 n.s	4.13	<0.05*
Light treatment (L)	1	149.44	≥0.05 n.s	22.70	<0.05*	4.8	<0.05*
S x L	1	149.44	≥0.05 n.s	0.01	≥0.05 n.s	0.30	≥0.05 n.s

*Significantly different at $p<0.05$, n.s Non-significant at $p<0.05$, df Degrees of freedom.

Table S6. Statistical analysis for the survival (%) of rooted shoots propagated *in vitro* coming from *Cryptomeria japonica* adult trees, after four weeks under *ex vitro* conditions.

Source	df	Survival (%)	
		X^2 Test	***p*-Value**
Sucrose concentration (S)	1	67.94	≥0.05 $^{n.s}$
Light treatment (L)	1	67.07	≥0.05 $^{n.s}$
S x L	1	60.17	<0.05*

*Significantly different at $p<0.05$, $^{n.s}$ Non-significant at $p<0.05$, df Degrees of freedom.

Table S7. Statistical analysis for the survival (%) showed in *Cryptomeria japonica* explants (basal explants of >1.5 cm length) cultured in QL medium [Quoirin and Lepoivre, 1977]), supplemented with 6-benzyladenine (BA), *meta*-Topolin (*m*-T) and thidiazuron (TDZ) (8.8 μM).

Source	df	Survival (%)	
		X^2 Test	***p*-Value**
Cytokinin type	2	703.95	≥0.05 $^{n.s}$

$^{n.s}$ Non-significant at $p<0.05$, df Degrees of freedom.

Table S8. Statistical analysis for shoot induction (%) and number of shoots per explant showed in *Cryptomeria japonica* explants (basal explants of >1.5 cm length) cultured in QL medium [Quoirin and Lepoivre, 1977]), supplemented with 6-benzyladenine (BA), *meta*-Topolin (*m*-T) and thidiazuron (TDZ) (8.8 μM).

Source	df	Shoot induction (%)		Nº shoots /explant	
		X^2 Test	***p*-Value**	***F* Test**	***p*-Value**
Cytokinin type (E)	1	405.51	<0.05*	0.19	≥0.05 $^{n.s}$

*Significantly different at $p<0.05$, $^{n.s}$ Non-significant at $p<0.05$, df Degrees of freedom.

Table S9. Statistical analysis for root induction (%), number root per explant and length of longest root showed in *Cryptomeria japonica* explants (basal explants of >1.5 cm length) cultured in QL medium [Quoirin and Lepoivre, 1977]), supplemented with 50 μM 1-naphthaleneacetic acid (NAA), according to cytokinin type (6-benzyladenine (BA), *meta*-Topolin (*m*-T) and Thidiazuron (TDZ)) (8.8 μM).

		Root induction		Nº root /explant		Length of longest root	
Source	df	**X^2 Test**	***p*-Value**	***F* Test**	***p*-Value**	***F* Test**	***p*-Value**
Cytokinin type	1	118.52	<0.05*	0.70	≥0.05 n.s	0.49	≥0.05 n.s

*Significantly different at $p<0.05$, n.s Non-significant at $p<0.05$, df Degrees of freedom.

Table S10. Statistical analysis for the survival (%) showed in *Cryptomeria japonica* explants (basal explants of >1.5 cm length) cultured in QL medium [Quoirin and Lepoivre, 1977]), supplemented with 50 μM 1-naphthaleneacetic acid (NAA), according to cytokinin type (6-benzyladenine (BA) and *meta*-Topolin (*m*-T) (8.8 μM)).

		Survival (%)	
Source	df	**X^2 Test**	***p*-Value**
Cytokinin type	1	14.53	≥0.05 n.s

n.s Non-significant at $p<0.05$, df Degrees of freedom.