

Table 1 Suppl. Tomato germplasm collection maintained at Department of Life Sciences, University of Modena and Reggio Emilia (UNIMORE). (-) tomato mutants displaying absence or reduction of anthocyanins in vegetative tissues; (+) tomato mutants displaying intensification of anthocyanin pigmentation. Seeds were kindly provided by CRA-ORA - Consiglio per la Ricerca e la sperimentazione in Agricoltura, Research Unit for Vegetable Crops, Monsampolo del Tronto, Italy; and by TGRC - Tomato Genetics Resource Centre, Department of Plant Sciences, University of California, Davis, USA.

Accession/cv.	Taxon	Categories/cv. name	Trait/comments	Source
3-302	<i>S. lycopersicum</i>	monogenic mutant, (-)	Hoffman's anthocyaninless (ah), background genotype: Moneymaker	TGRC
3-414	<i>S. lycopersicum</i>	monogenic mutant, (-)	anthocyaninless (a), background genotype: VF-36	TGRC
Albenga	<i>S. lycopersicum</i>	fresh market tomato cultivar		CRA-ORA
Corbarino	<i>S. lycopersicum</i>	processing and fresh market tomato ecotype		CRA-ORA
Corbarino	<i>S. lycopersicum</i>	processing and fresh market tomato ecotype		CRA-ORA
Alessandro	<i>S. lycopersicum</i>	processing and fresh market tomato ecotype		CRA-ORA
Costoluto rosa di Rotonda	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Cuor di Bue	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Albenga Cassani	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Cuor di Bue	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Albenga Riccia	<i>S. lycopersicum</i>	fresh market tomato cultivar		CRA-ORA
Cuor di Bue	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Ligure	<i>S. lycopersicum</i>	fresh market tomato cultivar		CRA-ORA
Eraldo	<i>S. lycopersicum</i>	fresh market tomato cultivar		CRA-ORA
H24	<i>S. lycopersicum</i>	introgression line (<i>S. habrochaites</i>)	resistant to gemini viruses (source of Ty-1 gene)	CRA-ORA
LA0490	<i>S. lycopersicum</i>	fresh market tomato cultivar, VF-36	background of 3-414 and LA0797	TGRC
LA0534	<i>S. lycopersicum</i>	fresh market tomato cultivar, Lukullus	background of LA0540 and LA2054	TGRC
LA0540	<i>S. lycopersicum</i>	monogenic mutant, (+)	clara (cla), background genotype: Lukullus	TGRC
LA0797	<i>S. lycopersicum</i>	monogenic mutant, (+)	atroviolacium (atv), background genotype: VF-36	TGRC
LA1194	<i>S. lycopersicum</i>	monogenic mutant, (-)	anthocyanin absent (aa), background genotype: Marmande	TGRC
LA1504	<i>S. lycopersicum</i>	fresh market tomato cultivar (Marmande)	background of LA1194	TGRC
LA1777	<i>S. habrochaites</i>	stress tolerant; wild species	chilling tolerant, resistant to late blight (<i>Phytophthora infestans</i>)	TGRC
LA1969	<i>S. chilense</i>	stress tolerant; wild species	chilling tolerant, Resistant to gemini viruses (source of Ty-1 gene)	TGRC
LA1978	<i>S. habrochaites</i>	stress tolerant; wild species	chilling tolerant	TGRC
LA1996	<i>S. lycopersicum</i>	monogenic mutant, (+)	anthocyanin fruit (Aft), derived from <i>L. chilense</i> ; possibly in cv. Vigoroz	TGRC
LA2054	<i>S. lycopersicum</i>	monogenic mutant, (+)	purpurea (ppa), background genotype: Lukullus	TGRC
LA2408	<i>S. lycopersicoides</i>	stress tolerant; wild species	chilling tolerant	TGRC
LA2574	<i>S. habrochaites</i>	stress tolerant; wild species	chilling tolerant	TGRC
LA2706	<i>S. lycopersicum</i>	fresh market tomato cultivar (Moneymaker)	background of LA3471, 3-302 and LA4013	TGRC
LA2838A	<i>S. lycopersicum</i>	fresh market tomato cultivar (Ailsa Craig)	background of LA3263, LA3612, LA3275, LA3576, LA3736, LA3281, LA3287, LA3818 and LA3764	TGRC
LA2976	<i>S. habrochaites</i>	stress tolerant; wild species	chilling tolerant	TGRC
LA3008	<i>S. lycopersicum</i>	processing and fresh market tomato cultivar (San Marzano)	background of LA3006	TGRC
LA3113	<i>S. chilense</i>	stress tolerant; wild species	chilling tolerant	TGRC
LA3263	<i>S. lycopersicum</i>	monogenic mutant, (-)	anthocyaninless (a), background genotype: Ailsa Craig	TGRC
LA3275	<i>S. lycopersicum</i>	disease resistant; misc markers, (-)	Hoffman's anthocyaninless (ah), background genotype: Ailsa Craig	TGRC

LA3281	<i>S. lycopersicum</i>	monogenic mutant, (-)	without anthocyanin (aw), background genotype: Ailsa Craig	TGRC
LA3287	<i>S. lycopersicum</i>	misc markers, (+)	high-pigment-1 (hp-1), background genotype: Ailsa Craig	TGRC
LA3471	<i>S. lycopersicum</i>	fresh market tomato cultivar (Mogeor), disease resistant (-)	anthocyanin absent (aa), background genotype: Moneymaker	TGRC
LA3576	<i>S. lycopersicum</i>	monogenic mutant, (-)	anthocyanin loser (al), background genotype: Ailsa Craig	TGRC
LA3612	<i>S. lycopersicum</i>	monogenic mutant, (-)	entirely anthocyaninless (ae), background genotype: Ailsa Craig	TGRC
LA3736	<i>S. lycopersicum</i>	monogenic mutant, (+)	atroviolacium (atv); background genotype: Ailsa Craig	TGRC
LA3764	<i>S. lycopersicum</i>	monogenic mutant, (+)	flexifolia (fle); background genotype: Ailsa Craig	TGRC
LA3818	<i>S. lycopersicum</i>	monogenic mutant, (+)	divaricata (div); background genotype: Ailsa Craig	TGRC
LA3956	<i>S. lycopersicum</i>	introgression line (<i>S. habrochaites</i>)	<i>S. lycopersicum</i> - <i>S. habrochaites</i> (LA1777) backcross recombinant inbred line in E6203.	TGRC
LA3957	<i>S. lycopersicum</i>	introgression line (<i>S. habrochaites</i>)	<i>S. lycopersicum</i> - <i>S. habrochaites</i> (LA1777) backcross recombinant inbred line in E6203.	TGRC
LA3958	<i>S. lycopersicum</i>	introgression line (<i>S. habrochaites</i>)	<i>S. lycopersicum</i> - <i>S. habrochaites</i> (LA1777) backcross recombinant inbred line in E6203.	TGRC
LA3959	<i>S. lycopersicum</i>	introgression line (<i>S. habrochaites</i>)	<i>S. lycopersicum</i> - <i>S. habrochaites</i> (LA1777) backcross recombinant inbred line in E6203.	TGRC
LA4008	<i>S. lycopersicum</i>	introgression line (<i>S. habrochaites</i>)	<i>S. lycopersicum</i> - <i>S. habrochaites</i> (LA1777) backcross recombinant inbred line in E6203.	TGRC
LA4013	<i>S. lycopersicum</i>	monogenic mutant, (+)	high-pigment-2 (hp-2); background genotype: Moneymaker	TGRC
LA4345	<i>S. lycopersicum</i>	processing tomato cultivar (Heinz 1706)	this line is being used for the tomato genome sequencing project	TGRC
Ligure	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Locale di Rotonda	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Marmande	<i>S. lycopersicum</i>	fresh market tomato cultivar		CRA-ORA
Claudia				
Nocerino	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Pisanello	<i>S. lycopersicum</i>	fresh market tomato cultivar		CRA-ORA
Pisanello	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Pescaia				
Pomodoro del Vesuvio	<i>S. lycopersicum</i>	fresh market tomato cultivar		CRA-ORA
Rosa Costoluto di Rotonda De Tommaso	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Rosa di Maratea	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Rosa di Rotonda	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
Rotonda Ligure	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA
San Marzano	<i>S. lycopersicum</i>	processing and fresh market tomato cultivar		CRA-ORA
San Marzano Baldoni	<i>S. lycopersicum</i>	processing and fresh market tomato cultivar		CRA-ORA
San Marzano Linea 4	<i>S. lycopersicum</i>	processing and fresh market tomato line		CRA-ORA
San Marzano Linea 8	<i>S. lycopersicum</i>	processing and fresh market tomato line		CRA-ORA
Vesuvio	<i>S. lycopersicum</i>	fresh market tomato ecotype		CRA-ORA

Table 2 Suppl. Candidate genes showing none or slightly modulation in Albenga and San Marzano after chilling stress (1 °C) for the indicated time points [h]. Gene expression values are represented as means and SE (expression standard error as calculated by the software *REST*) $n = 3$. Relative gene expression was normalized to *EF-1-α* expression and then to the respective control for each time point (pair wise fixed reallocation randomization test at * - $P \leq 0.05$, ** - $P \leq 0.01$, and *** - $P \leq 0.001$).

	Gene	Time point [h]	Albenga expression	SE ranes		San Marzano expression	SE range	
CBF/DREB1 regulon	Solyc07g007750 defensin protein	2	1.10	0.98	1.26	1.31***	1.16	1.53
		4	-1.91	-5.35	-1.02	1.09	-1.02	1.29
		8	-1.23*	-1.37	-1.11	2.00	1.66	2.31
		24	1.32*	1.13	1.57	2.30*	2.06	2.69
		72	-1.16	-1.26	-1.04	-1.21	-1.34	-1.02
		72 + 264	-1.07	-1.24	1.04	-1.21	-1.54	1.03
ROS-mediated regulon	Solyc10g054560 V-ATPase	2	-1.49	-1.89	-1.25	-1.49	-1.96	-1.14
		4	-1.15	-1.50	1.03	-1.31	-1.77	1.02
		8	-1.24	-1.57	-1.04	-1.49	-2.00	-1.12
		24	1.04	-1.20	1.34	-1.43	-1.96	-1.11
		72	-2.10	-2.73	-1.74	-2.44	-3.27	-1.87
		72 + 264	-1.02	-1.07	1.02	-1.36	-2.01	-1.05
	Solyc04g076850 Aux/IAA protein	2	1.65	1.31	2.29	1.58*	1.23	2.05
		4	1.30	-1.02	1.58	1.44***	.16	1.70
		8	1.82*	1.45	2.27	1.60*	.27	2.10
		24	1.73***	1.38	2.34	1.20	-1.04	1.46
		72	-1.16	-1.43	1.10	-1.81*	-2.33	-1.33
		72 + 264	-1.16	-1.65	1.29	-2.62*	-3.15	-2.06
Chilling induced genes	Solyc02g065380 COR413-PM1	2	1.24	-1.07	1.79	-1.24	-1.32	-1.16
		4	1.47	1.02	1.91	-1.06	-1.14	1.02
		8	1.23	-1.16	1.93	-1.12	-1.20	-1.01
		24	1.62***	1.21	2.36	1.14	1.00	1.35
		72	-1.08	-1.45	1.31	-2.18***	-2.52	-1.80
		72 + 264	1.23	-1.16	1.80	-1.01	-1.55	1.42
	Solyc04g054910 ERF13	2	2.77	1.98	3.36	2.37***	2.23	2.55
		4	2.37	2.07	2.59	2.06***	1.93	2.19
		8	2.32	2.23	2.42	1.58*	1.49	1.65
		24	1.77	1.63	1.90	1.09***	1.04	1.14
		72	1.38	1.33	1.42	-1.54	-1.74	-1.31
		72 + 264	1.11	1.02	1.21	-1.34*	-1.39	-1.27
	Solyc02g083680 histidine kinase 1	2	3.30***	2.35	4.49	4.36***	2.45	9.26
		4	1.60*	1.35	1.88	2.60*	2.08	3.16
		8	2.59***	2.26	.08	1.59	-1.06	2.27
		24	2.23	1.95	2.60	1.74*	1.30	2.36
		72	1.92***	1.68	2.29	-1.12	-1.41	1.17
		72 + 264	1.05	-1.05	1.17	-2.82***	-4.13	-1.46
	Solyc06g007130 A9LNM9	2	-3.47***	-3.85	-3.07	-2.71	-3.18	-2.29
		4	-3.34***	-3.98	-2.54	-2.83	-3.12	-2.51
		8	-1.75*	-1.84	-1.62	-4.08***	-4.88	-3.37
		24	-2.02	-2.24	-1.80	-2.97***	-3.48	-2.54
		72	-3.23*	-3.76	-2.54	-3.130	-3.85	-2.59
		72 + 264	-1.02	-1.24	.15	1.35	-1.09	1.94
	Solyc06g051400 Q7X719	2	1.87*	1.74	2.04	1.36*	1.08	1.61
		4	2.31*	2.12	.51	1.57	1.25	1.87
		8	2.46*	.13	2.82	1.44	.05	1.90
		24	1.75*	.49	1.97	1.66*	1.31	1.94
		72	1.33	.26	1.44	-1.23	-1.53	-1.04
		72 + 264	-1.01	-1.09	1.08	-1.20	-1.48	1.02