

Table S2. Relative content of metabolites in hypocotyls of gravistimulated and nongravistimulated wild type Col-0 and *cs/a2cs/a3cs/a9* Arabidopsis seedlings. Results of three independent experiments (n=8). Data are given in arbitrary units.

Abbreviations:
WT - nongravistimulated wild type Col-0 seedlings;
M - nongravistimulated *cs/a2cs/a3cs/a9* triple mutant seedlings;
WTG - gravistimulated wild type Col-0 seedlings;
MG - gravistimulated *cs/a2cs/a3cs/a9* triple mutant seedlings.
Data are means, standard errors (SE) and *P* values of pairwise comparisons of the above variants using Student's *t*-test.
All metabolites for which significant differences between nongravistimulated and gravistimulated variants (WT vs. WTG and M vs. MG) were found are indicated in bold. In the case of a significant increase in the content of a metabolite in gravistimulated vs. nongravistimulated seedlings (WTG vs. WT and MG vs. M), as well as in *cs/a2cs/a3cs/a9* triple mutant seedlings compared with wild type Col-0 seedlings (M vs. WT and MG vs. WTG) the respective *P* values are shown on a red background. In the case of a significant decrease in the content of a metabolite in the abovementioned comparisons the respective *P* values are shown on a blue background.

Metabolite	WT	WT, SE	WTG	WTG,SE	M	M, SE	MG	MG, SE	<i>P</i> value, WT/WTG	<i>P</i> value, WT/M	<i>P</i> value, WTG/MG	<i>P</i> value, M/MG
1-Pyrroline-3-hydroxy-5-carbonic acid	3.300	0.681	3.573	0.301	3.241	0.299	3.457	0.558	0.361	0.469	0.429	0.371
Alanine	0.263	0.070	0.396	0.040	0.244	0.024	0.228	0.057	0.063	0.403	0.017	0.398
β-Alanine	0.138	0.028	0.145	0.012	0.141	0.014	0.153	0.024	0.415	0.466	0.385	0.336
Alanyl-alanine	0.599	0.089	0.575	0.142	0.519	0.064	0.598	0.133	0.445	0.238	0.454	0.303
Asparagine	0.209	0.050	0.257	0.029	0.194	0.031	0.193	0.047	0.211	0.402	0.139	0.496
Aspartic acid	0.128	0.028	0.131	0.009	0.169	0.016	0.199	0.031	0.456	0.116	0.037	0.208
Benzoic acid	0.038	0.005	0.052	0.008	0.041	0.004	0.035	0.004	0.077	0.340	0.044	0.202
β-D-allose	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.190	0.074	0.295	0.398
4-Aminobutanoic acid	0.170	0.037	0.176	0.013	0.146	0.018	0.163	0.020	0.443	0.285	0.295	0.275
Cellobiose	0.000	0.000	0.027	0.027	0.000	0.000	0.000	0.000	0.174	0.413	0.174	0.408
D230150	0.039	0.013	0.027	0.010	0.025	0.007	0.025	0.005	0.234	0.188	0.445	0.494
Ethanolamine	0.417	0.143	0.250	0.053	0.268	0.043	0.316	0.023	0.151	0.174	0.140	0.174
Fumaric acid	0.037	0.008	0.036	0.004	0.039	0.006	0.039	0.006	0.487	0.419	0.350	0.484
Galactaric acid	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.425	0.119	0.260	0.294
Glycine	1.170	0.234	1.198	0.110	1.194	0.100	1.148	0.194	0.457	0.463	0.414	0.419
2-Phenylglycine	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.068	0.391	0.415	0.129
Hexadecanoic acid	0.791	0.117	0.870	0.076	0.879	0.088	0.854	0.093	0.290	0.279	0.446	0.424
Hydroxylamine	0.073	0.014	0.081	0.007	0.094	0.011	0.078	0.007	0.312	0.124	0.399	0.119
Idose	0.105	0.043	0.094	0.013	0.112	0.020	0.136	0.014	0.406	0.447	0.025	0.171
Myo-inositol	3.673	0.702	3.646	0.290	3.666	0.368	3.875	0.500	0.486	0.497	0.350	0.371
Isoleucine	0.232	0.056	0.240	0.027	0.215	0.026	0.229	0.048	0.449	0.398	0.424	0.404
Leucine	0.131	0.032	0.120	0.015	0.130	0.014	0.147	0.029	0.377	0.486	0.208	0.300
Lysine	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.409	0.319	0.114	0.229

Metabolite	WT	WT, SE	WTG	WTG,SE	M	M, SE	MG	MG, SE	P value, WT/WTG	P value, WT/M	P value, WTG/MG	P value, M/MG
Lyxose	0.120	0.049	0.091	0.034	0.072	0.017	0.082	0.013	0.320	0.191	0.406	0.321
Malic acid	0.020	0.004	0.020	0.001	0.018	0.003	0.023	0.003	0.496	0.341	0.202	0.131
NA_aldehyde(C9H18O)	0.628	0.121	0.691	0.090	0.762	0.109	0.920	0.171	0.341	0.212	0.133	0.227
NA_benzyl ester	1.244	0.300	1.447	0.268	1.064	0.140	1.111	0.372	0.311	0.299	0.239	0.455
NA114002	0.763	0.153	0.907	0.119	0.777	0.090	0.639	0.185	0.236	0.470	0.125	0.260
Octadecanoic acid	1.099	0.180	1.096	0.072	1.182	0.137	1.054	0.117	0.493	0.360	0.385	0.247
Ornithine	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.271	0.132	0.257	0.413
Phenylalanine	0.172	0.043	0.188	0.025	0.160	0.021	0.165	0.033	0.380	0.405	0.295	0.456
Phosphoric acid	2.666	0.361	3.128	0.270	3.080	0.322	3.575	0.489	0.162	0.203	0.222	0.209
Proline	0.079	0.014	0.087	0.022	0.112	0.018	0.154	0.032	0.374	0.084	0.059	0.144
Carboxy-proline	0.002	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.209	0.093	0.180	0.050
4-Hydroxyproline	0.161	0.024	0.166	0.010	0.127	0.012	0.124	0.012	0.420	0.118	0.008	0.425
Psicose	1.771	0.711	1.114	0.105	2.442	0.559	2.115	0.356	0.195	0.235	0.015	0.315
Ribose	0.310	0.088	0.260	0.018	0.386	0.057	0.387	0.057	0.296	0.242	0.035	0.491
Serine	0.142	0.027	0.143	0.010	0.163	0.015	0.168	0.025	0.486	0.251	0.189	0.434
Similar to 2,3-dihydropropyl ester of octadecanoic acid	3.152	0.502	3.211	0.217	3.937	0.646	3.278	0.415	0.459	0.177	0.445	0.204
Sinapic acid	0.041	0.008	0.043	0.005	0.044	0.007	0.056	0.009	0.411	0.370	0.116	0.174
Sucrose	3.115	0.689	3.387	0.395	3.318	0.468	4.063	0.683	0.369	0.406	0.206	0.194
Allo-threonine	0.291	0.062	0.308	0.031	0.305	0.033	0.328	0.061	0.405	0.427	0.391	0.373
Tyrosine	0.131	0.043	0.240	0.109	0.102	0.011	0.098	0.014	0.188	0.263	0.118	0.415
Valine	0.276	0.064	0.222	0.047	0.260	0.028	0.225	0.041	0.255	0.412	0.481	0.251