

Table S1. Effect of HL stress and melatonin on the expression of cytokinin synthesis and signaling genes metabolism, reception and signaling genes. The data presented in the table are the mean values ($n \geq 3$). Error bars represent SEs. Different letters denote statistically significant differences between variants within the same genotype at $p < 0.05$ (ANOVA with post hoc Tukey's multiple-comparison test), asterisks indicate statistically significant differences between the mutants and the wild type under corresponding type of treatment at $p < 0.05$ (t-test).

Gene	Genotype	Experimental conditions			
		Control	Stress	Control + 50 μ M melatonin	Stress + 50 μ M melatonin
<i>IPT3</i>	WT	1.000 \pm 0.098 ^b	0.408 \pm 0.053 ^a	0.990 \pm 0.101 ^b	0.795 \pm 0.084 ^b
	<i>ahk2,3</i>	6.787 \pm 0.707 ^{b*}	5.239 \pm 0.564 ^{a*}	7.229 \pm 0.809 ^{b*}	3.427 \pm 0.311 ^{a*}
	<i>arr1,10,12</i>	4.378 \pm 0.511 ^{b*}	2.907 \pm 0.271 ^{a*}	3.638 \pm 0.425 ^{ab*}	2.360 \pm 0.267 ^{a*}
	<i>ipt3,5,7</i>	-	-	-	-
<i>IPT5</i>	WT	1.000 \pm 0.086 ^b	0.718 \pm 0.084 ^a	1.035 \pm 0.119 ^b	0.971 \pm 0.096 ^b
	<i>ahk2,3</i>	2.278 \pm 0.321 ^{b*}	1.273 \pm 0.139 ^{a*}	2.046 \pm 0.255 ^{b*}	1.358 \pm 0.144 ^a
	<i>arr1,10,12</i>	1.221 \pm 0.111 ^a	0.789 \pm 0.088 ^b	1.096 \pm 0.131 ^a	0.725 \pm 0.074 ^b
	<i>ipt3,5,7</i>	-	-	-	-
<i>LOG7</i>	WT	1.000 \pm 0.126 ^c	0.220 \pm 0.030 ^b	0.872 \pm 0.091 ^c	0.104 \pm 0.013 ^a
	<i>ahk2,3</i>	0.245 \pm 0.019 ^{b*}	0.102 \pm 0.011 ^{a*}	0.222 \pm 0.027 ^{b*}	0.115 \pm 0.014 ^a
	<i>arr1,10,12</i>	0.184 \pm 0.021 ^{ab*}	0.240 \pm 0.23 ^b	0.228 \pm 0.025 ^{b*}	0.129 \pm 0.008 ^a
	<i>ipt3,5,7</i>	0.215 \pm 0.023 ^{c*}	0.089 \pm 0.07 ^{b*}	0.190 \pm 0.020 ^{c*}	0.058 \pm 0.006 ^{a*}
<i>CKX3</i>	WT	1.000 \pm 0.098 ^b	0.791 \pm 0.086 ^b	1.123 \pm 0.135 ^b	0.354 \pm 0.047 ^a
	<i>ahk2,3</i>	0.052 \pm 0.006 ^{b*}	0.018 \pm 0.002 ^{a*}	0.047 \pm 0.06 ^{b*}	0.021 \pm 0.003 ^{a*}
	<i>arr1,10,12</i>	0.142 \pm 0.019 ^{b*}	0.058 \pm 0.017 ^{a*}	0.052 \pm 0.006 ^{a*}	0.050 \pm 0.006 ^{a*}
	<i>ipt3,5,7</i>	1.711 \pm 0.166 ^{c*}	0.269 \pm 0.021 ^{b*}	0.195 \pm 0.033 ^{b*}	0.116 \pm 0.012 ^{a*}
<i>CKX5</i>	WT	1.000 \pm 0.102 ^a	1.019 \pm 0.084 ^a	0.826 \pm 0.084 ^a	0.928 \pm 0.093 ^a
	<i>ahk2,3</i>	0.442 \pm 0.051 ^{b*}	0.239 \pm 0.025 ^{a*}	0.394 \pm 0.038 ^{b*}	0.336 \pm 0.037 ^{ab*}
	<i>arr1,10,12</i>	0.263 \pm 0.027 ^{a*}	0.616 \pm 0.063 ^{b*}	0.252 \pm 0.025 ^{a*}	0.247 \pm 0.022 ^{a*}
	<i>ipt3,5,7</i>	1.401 \pm 0.137 ^{ab}	1.470 \pm 0.161 ^{ab*}	1.886 \pm 0.235 ^{b*}	1.237 \pm 0.136 ^a
<i>AHK2</i>	WT	1.000 \pm 0.098 ^c	0.277 \pm 0.033 ^a	1.108 \pm 0.124 ^c	0.565 \pm 0.066 ^b
	<i>ahk2,3</i>	-	-	-	-
	<i>arr1,10,12</i>	0.501 \pm 0.062 ^{b*}	0.382 \pm 0.042 ^a	0.441 \pm 0.042 ^{ab*}	0.391 \pm 0.046 ^{ab*}
	<i>ipt3,5,7</i>	1.316 \pm 0.147 ^c	0.236 \pm 0.026 ^a	0.582 \pm 0.067 ^{b*}	0.222 \pm 0.028 ^{a*}
<i>AHK3</i>	WT	1.000 \pm 0.076 ^b	0.709 \pm 0.064 ^{a*}	1.001 \pm 0.085 ^b	0.640 \pm 0.052 ^a
	<i>ahk2,3</i>	-	-	-	-
	<i>arr1,10,12</i>	0.514 \pm 0.055 ^{a*}	0.462 \pm 0.050 ^{a*}	0.400 \pm 0.048 ^{a*}	0.459 \pm 0.045 ^a
	<i>ipt3,5,7</i>	0.885 \pm 0.093 ^b	0.561 \pm 0.050 ^a	0.586 \pm 0.063 ^{a*}	0.529 \pm 0.054 ^a
<i>AHK4</i>	WT	1.000 \pm 0.091 ^a	4.408 \pm 0.459 ^c	1.125 \pm 0.098 ^a	2.401 \pm 0.261 ^b
	<i>ahk2,3</i>	1.409 \pm 0.124 ^a	1.654 \pm 0.171 ^{a*}	1.248 \pm 0.102 ^a	1.352 \pm 0.099 ^{a*}
	<i>arr1,10,12</i>	0.919 \pm 0.085 ^a	1.003 \pm 0.103 ^{a*}	0.726 \pm 0.080 ^a	0.753 \pm 0.078 ^{a*}
	<i>ipt3,5,7</i>	0.191 \pm 0.016 ^{a*}	0.877 \pm 0.061 ^{c*}	0.398 \pm 0.041 ^{b*}	0.895 \pm 0.092 ^{c*}

<i>ARR1</i>	WT	1.000±0.079 ^c	0.368±0.042 ^a	0.916±0.078 ^c	0.629±0.072 ^b
	<i>ahk2,3</i>	0.905±0.097 ^b	0.390±0.047 ^a	0.986±0.091 ^b	0.405±0.047 ^a
	<i>arr1,10,12</i>	-	-	-	-
	<i>ipt3,5,7</i>	0.345±0.040 ^{a*}	0.300±0.032 ^a	0.691±0.081 ^b	0.275±0.030 ^{a*}
<i>ARR4</i>	WT	1.000±0.088 ^c	0.160±0.019 ^a	0.850±0.059 ^c	0.448±0.021 ^b
	<i>ahk2,3</i>	0.449±0.051 ^{a*}	0.503±0.062 ^{a*}	0.491±0.053 ^{a*}	0.391±0.044 ^a
	<i>arr1,10,12</i>	0.411±0.045 ^{b*}	0.125±0.011 ^{a*}	0.327±0.036 ^{b*}	0.093±0.012 ^{a*}
	<i>ipt3,5,7</i>	0.106±0.018 ^{a*}	0.113±0.009 ^{a*}	0.138±0.013 ^{a*}	0.130±0.015 ^{a*}
<i>ARR5</i>	WT	1.000±0.077 ^c	0.186±0.024 ^a	0.703±0.050 ^b	0.581±0.044 ^b
	<i>ahk2,3</i>	0.921±0.091 ^a	0.850±0.091 ^{a*}	0.807±0.081 ^a	0.730±0.084 ^a
	<i>arr1,10,12</i>	0.371±0.040 ^{b*}	0.075±0.007 ^{a*}	0.316±0.038 ^{b*}	0.080±0.012 ^{a*}
	<i>ipt3,5,7</i>	0.447±0.046 ^{c*}	0.080±0.009 ^{a*}	0.136±0.015 ^{b*}	0.148±0.017 ^{b*}
<i>ARR12</i>	WT	1.000±0.093 ^c	0.305±0.041 ^a	0.999±0.114 ^c	0.568±0.061 ^b
	<i>ahk2,3</i>	0.912±0.090 ^b	0.409±0.048 ^a	0.969±0.090 ^b	0.445±0.043 ^a
	<i>arr1,10,12</i>	-	-	-	-
	<i>ipt3,5,7</i>	0.232±0.019 ^{b*}	0.280±0.032 ^a	0.429±0.046 ^{b*}	0.228±0.024 ^{b*}
<i>CRF6</i>	WT	1.000±0.114 ^a	2.214±0.246 ^b	0.982±0.086 ^a	1.070±0.098 ^a
	<i>ahk2,3</i>	1.401±0.165 ^a	3.123±0.325 ^b	1.352±0.147 ^a	3.574±0.277 ^{b*}
	<i>arr1,10,12</i>	0.842±0.094 ^a	3.368±0.434 ^b	1.124±0.134 ^a	4.175±0.422 ^{b*}
	<i>ipt3,5,7</i>	0.228±0.031 ^{a*}	2.721±0.223 ^c	0.811±0.099 ^b	4.595±0.547 ^{d*}