

**Table S12.** List of expression values of MAPK cascades genes in cold stress.

DH7 log(c), DH7 log(k), DL3 log(c), DL3 log(k) means intensity (AU) of fluorescence of labeled aaRNA from cold-treatment (c) or control (k) hybridizing to the probe, shown as log<sub>2</sub> in the respective maize line.

DH7 log(c/k), DL3 log(c/k) means log<sub>2</sub> of ratio of expression in cold-treated vs. control of the probe in the respective maize line, respectively.

Values in red and blue indicate the fold increase and decrease in expression in the drought-stressed tissue, respectively.

Name	DH7 log(c)	DH7 log(k)	DL3 log(c)	DL3 log(k)	DH7 log(c/k)	DL3 log(c/k)
<i>ZmMPK12</i>	9.254116583	7.200538964	8.20086412	7.333360334	2.053577619	0.867503787
<i>ZmMPK8</i>	13.22432994	11.41630225	13.11966704	11.50011744	1.808027689	1.619549601
<i>ZmMPK6</i>	15.14855681	13.48505243	15.06134986	13.27489091	1.663504377	1.786458955
<i>ZmMPK11</i>	15.31213933	13.96328979	14.30758897	13.48709859	1.348849546	0.820490376
<i>ZmMPK15</i>	10.53304883	9.745627793	10.80796001	9.83340504	0.787421036	0.974554965
<i>ZmSIMK1</i>	13.13658422	12.6242119	12.65871102	12.7195762	0.512372319	-0.060865177
<i>ZmMPK18</i>	4.756354241	4.311253469	4.056122838	4.429762786	0.445100772	-0.373639948
<i>ZmMPK7</i>	6.683178896	6.468164744	6.976859148	6.648353878	0.215014152	0.328505269
<i>ZmMPK17</i>	5.192545189	4.99732629	6.322607684	7.289694171	0.195218898	-0.967086487
<i>ZmMPK14</i>	10.26658238	10.15206192	9.017493217	10.32444081	0.114520462	-1.306947597
<i>ZmMPK5</i>	12.85316178	12.75161444	13.07026569	12.91017476	0.101547339	0.160090937
<i>ZmMPK13</i>	12.36386923	13.24702517	11.47730413	12.7159848	-0.883155944	-1.238680673
<i>ZmMPK19</i>	8.487688796	9.030434262	7.564654052	8.248587891	-0.542745467	-0.683933839
<i>ZmMPK9</i>	14.21169279	14.21449407	13.94709853	14.42509794	-0.002801284	-0.477999414
<i>ZmMKK4</i>	9.777898743	8.127095532	10.07403	8.46065406	1.650803211	1.613375939
<i>ZmMKK2</i>	13.76736701	12.15013463	13.45736558	12.60051611	1.61723238	0.856849477
<i>ZmMEK1</i>	12.893139	12.2177944	12.98147008	12.53279652	0.675344602	0.448673556
<i>ZmMKK3</i>	12.1085362	11.94255781	12.24325035	11.67407897	0.165978392	0.569171386
<i>ZmMAPKKK1</i>	8.189048157	6.181811273	7.281574545	6.471011025	2.007236885	0.81056352
<i>ZmMAPKKK17</i>	12.41205315	10.45336959	12.6508795	10.4684761	1.958683554	2.182403405
<i>ZmZIK9</i>	9.735825897	7.832775883	10.12909004	7.733996513	1.903050014	2.395093527
<i>ZmRaf43</i>	8.914847884	7.364287245	9.49896839	7.143936482	1.550560639	2.355031908
<i>ZmRaf17</i>	9.893726452	8.510778546	9.948100239	9.324363095	1.382947906	0.623737145
<i>ZmRaf24</i>	5.117494528	3.817492973	5.399006486	4.741912681	1.300001555	0.657093805
<i>ZmRaf21</i>	14.71892051	13.5437152	14.56757306	13.49674125	1.17520531	1.070831813
<i>ZmMAPKKK14</i>	10.34847224	9.208019176	10.47601244	9.700474473	1.140453066	0.775537972
<i>ZmRaf30</i>	13.10940745	11.97485869	13.34146547	12.48621839	1.134548752	0.855247073
<i>ZmMAPKKK15</i>	8.532986403	7.405960399	8.407826647	7.769676551	1.127026004	0.638150096
<i>ZmRaf36</i>	12.93593327	11.86453755	13.27170465	12.11582454	1.071395725	1.155880108
<i>ZmRaf33</i>	11.43664635	10.6636381	11.55813477	10.74647079	0.773008251	0.811663983
<i>ZmMAPKKK12</i>	13.02316267	12.37400542	13.34745165	12.09574693	0.649157243	1.25170472
<i>ZmRaf41</i>	11.33842266	10.76511517	11.14448343	10.97057874	0.573307485	0.173904693
<i>ZmMAPKKK20</i>	13.00805577	12.45398296	13.39232267	12.63840526	0.55407281	0.753917401
<i>ZmRaf10</i>	11.56493173	11.08143532	11.10515527	10.87224434	0.48349641	0.232910932
<i>ZmRaf34</i>	12.76782754	12.28815883	12.98659957	12.45851406	0.479668705	0.528085508
<i>ZmMAPKKK9</i>	4.9261356	4.47370648	4.306421197	5.178268389	0.45242912	-0.871847192
<i>ZmRaf46</i>	5.685994702	5.294430364	5.461370454	5.486057814	0.391564338	-0.02468736
<i>ZmRaf22</i>	7.167631948	6.797945569	7.7060638	7.014447016	0.369686379	0.691616783
<i>ZmRaf13</i>	9.313627673	8.969110755	9.553672013	9.156736227	0.344516918	0.396935786
<i>ZmMAPKKK22</i>	5.717093852	5.39765161	6.260692066	5.609134973	0.319442241	0.651557093
<i>ZmMAPKKK4</i>	5.692196525	5.381332141	5.051736969	4.805321031	0.310864384	0.246415937
<i>ZmZIK5</i>	6.798246672	6.598506146	6.385781281	6.559547568	0.199740526	-0.173766286
<i>ZmRaf27</i>	7.980814485	7.813456789	8.463429828	7.644492232	0.167357697	0.818937596
<i>ZmRaf3</i>	5.634369727	5.619876665	6.084586514	6.262405428	0.014493062	-0.177818914

<i>ZmRaf48</i>	5.307389694	5.304565809	5.330829948	4.250487882	0.002823885	1.080342066
<i>ZmRaf8</i>	4.675533846	6.686077069	5.020401769	4.72959565	-2.010543223	0.290806119
<i>ZmZIK1</i>	10.09385552	11.90580262	10.11753305	11.35247381	-1.811947105	-1.234940767
<i>ZmZIK4</i>	5.616491563	7.086842371	6.051311611	6.598966122	-1.470350808	-0.547654511
<i>ZmMAPKKK26</i>	5.27517407	6.610889577	6.974709664	6.755000023	-1.335715507	0.219709641
<i>ZmRaf42</i>	5.433701907	6.723931409	5.906491003	6.921752348	-1.290229502	-1.015261346
<i>ZmRaf25</i>	12.02212757	13.17998342	12.03284736	12.84867499	-1.157855853	-0.815827627
<i>ZmMAPKKK24</i>	8.603284666	9.515872955	8.48110041	8.93587197	-0.912588289	-0.45477156
<i>ZmMAPKKK19</i>	3.122488733	3.994537715	4.054041929	4.428658957	-0.872048981	-0.374617028
<i>ZmRaf44</i>	12.05309393	12.85911873	12.00965786	12.84286281	-0.806024803	-0.833204957
<i>ZmRaf5</i>	11.39152877	12.15146194	11.05349106	11.57888824	-0.759933176	-0.525397173
<i>ZmRaf18</i>	5.89235873	6.582025782	6.771543652	7.526038503	-0.689667052	-0.754494851
<i>ZmRaf9</i>	10.98029623	11.6699405	10.87310034	11.26539626	-0.689644269	-0.392295916
<i>ZmZIK2</i>	7.474823641	8.042468285	7.877490428	7.659317647	-0.567644644	0.218172781
<i>ZmZIK6</i>	6.935373239	7.478075967	7.753648509	7.020270619	-0.542702728	0.73337789
<i>ZmRaf15</i>	9.709932613	10.11948442	9.924222955	10.09145835	-0.409551807	-0.16723539
<i>ZmRaf38</i>	6.531919069	6.905286665	7.075857156	7.762922111	-0.373367596	-0.687064955
<i>ZmRaf35</i>	6.617802348	6.978270192	6.322781806	6.594760653	-0.360467845	-0.271978847
<i>ZmMAPKKK18</i>	4.253833586	4.504590288	5.049186055	3.613424905	-0.250756702	1.43576115
<i>ZmRaf11</i>	13.10141887	13.25022488	13.25289585	13.2594104	-0.148806013	-0.006514552
<i>ZmZIK3</i>	7.730162696	7.835001822	7.547250841	8.044467974	-0.104839126	-0.497217132
<i>ZmRaf49</i>	4.886999838	4.974329999	3.852374191	4.102692639	-0.087330161	-0.250318449
<i>ZmRaf26</i>	11.62864962	11.68901412	11.55233054	11.71508905	-0.060364498	-0.162758518
<i>ZmRaf39</i>	10.62829996	10.67119362	10.06093834	9.874994743	-0.042893652	0.1859436
<i>ZmRaf14</i>	8.922694947	8.935517068	9.109013834	9.064372486	-0.012822121	0.044641348
<i>ZmMAP4K1</i>	7.17023491	6.683130257	7.358496603	6.884089897	0.487104652	0.474406706
<i>ZmMAP4K2</i>	7.17023491	6.683130257	7.358496603	6.884089897	0.487104652	0.474406706
<i>ZmMAP4K4</i>	3.47329336	4.493932595	3.564888674	5.198293706	-1.020639236	-1.633405032
<i>ZmMIK</i>	8.78436926	9.587351631	9.276597284	9.539646825	-0.802982371	-0.263049541
<i>ZmMAP4K3</i>	7.420463901	8.049236824	7.749727889	8.521599719	-0.628772924	-0.77187183
<i>ZmMAP4K8</i>	2.707298071	3.106683345	2.796541081	2.497869603	-0.399385274	0.298671479
<i>ZmMAP4K5</i>	11.42759805	11.73388569	11.84504307	11.72480653	-0.306287636	0.120236547
<i>ZmMAP4K7</i>	5.732740809	5.752620162	5.878489116	6.57958658	-0.019879354	-0.701097464